

# FANTASY

TM  
No. 5  
\$3.00  
£1.50

## Modeling

**VICTORIAN  
SPACESHIPS**

**HI-TECH  
ROCKETRY**

**KITS THAT  
ALMOST  
WERE**

**DUNGEON  
DIORAMA**

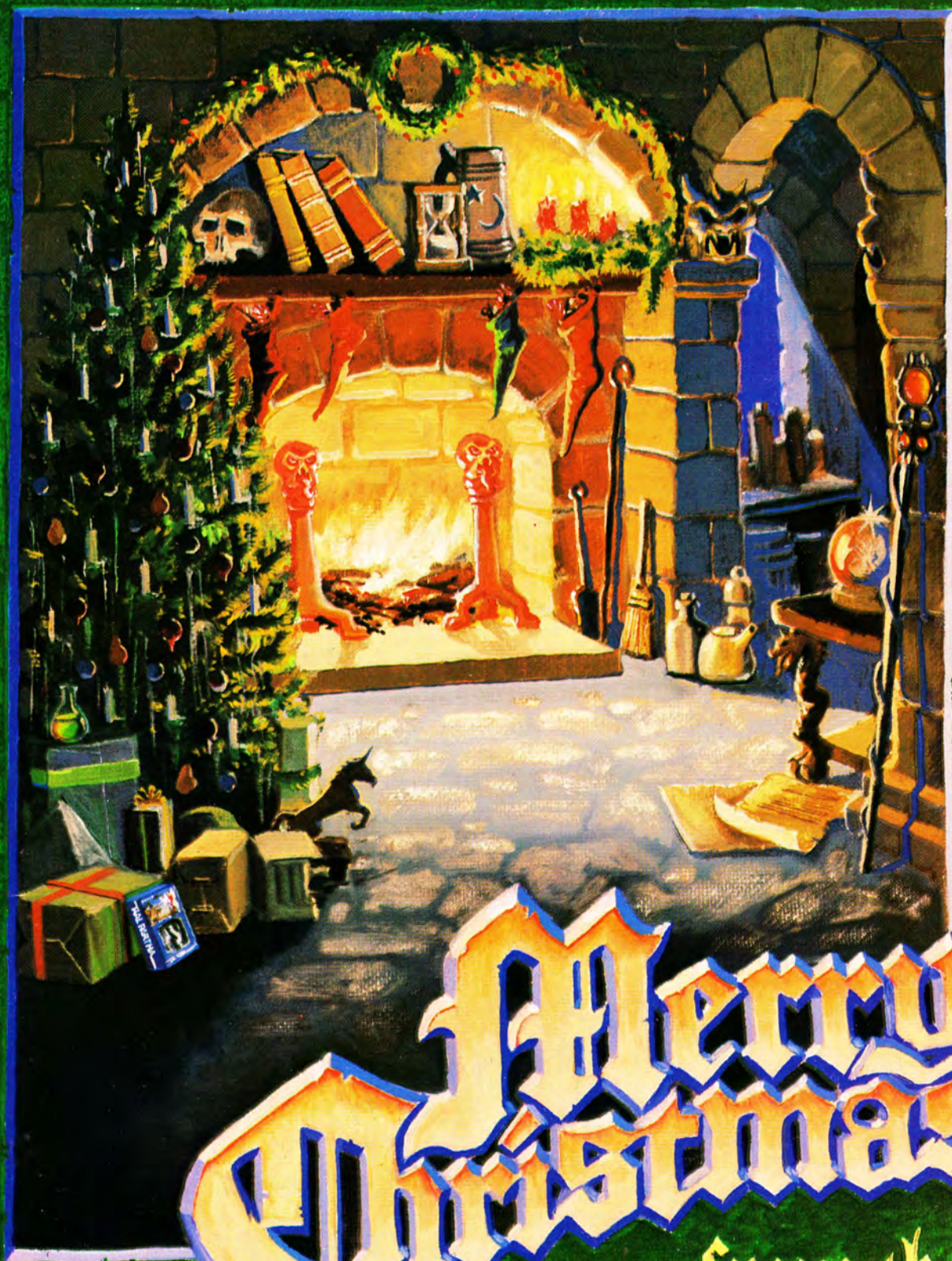


**A SPACESHIP FOR THE KING**

---

**COMPUTER GAMING**





**Merry  
Christmas**

from the  
Ral Partha family



# FANTASY<sup>TM</sup>

## Modeling

VOLUME FIVE

**5** EDITORIAL

Philip O. Stearns

**6** VICTORIAN SPACESHIPS

Rick Overton

**10** DUNGEON DIORAMA

Philip O. Stearns



**Britains (U.K.) enter the fantasy world with these new space persons.**

**14** MODEL KITS THAT ALMOST WERE

Andrew P. Yanchus

**18** A SPACESHIP FOR THE KING

David Douglass Merriman III

**22** COMPUTER GAMING

Mike Kilbert

**26** ADVENTURES IN GAMING

**27** READERS' PHOTO PAGE

**28** SPACECRAFT PHOTOGRAPHY

Jack Gurner

**34** NEW TECHNOLOGIES IN ROCKETS

Michael A. Banks

**38** SUPER DETAILING SPACESHIPS

Jeff Pollizzotto

**42** THE COMPETITIVE EDGE

Philip O. Stearns

**44** BOOK REVIEWS

**46** LETTERS

**48** COLLECTABLES

**50** ODDS AND ENDS

Andrew P. Yanchus



# FANTASY AND SCIENCE FICTION

## GAMES

**CAR WARS:** Build your future auto with machineguns, flamethrowers, rockets, smoke-screens, and armor — then take it out on the freeway. **DRIVE OFFENSIVELY!** A fast-moving game with road maps and full-color counters for cars, vans, and cycles! Only \$3.00.

**KILLER:** The first rulebook for the "Assassin Game" that's being played on campuses across the country. 40 pages of gadgets, scenarios, and rules for wiping your friends out . . . without hurting them. A **LIVE** role-playing game for intelligent, creative, and slightly uncivilized people — only \$5.00!

**UNDEAD:** The adventures of Count Dracula in London, closely based on the original novel. One player is Count Dracula, hiding his coffins and biting maidens' necks. The other player(s) — one or several — try to hunt him down. The vampire can change his shape — the hunters can recruit new help (even Sherlock Holmes!) A tense battle of wits. \$3.00.

**KUNG FU 2100:** A science-fantasy game of the far future. Three Terminators — skilled masters of the martial arts — invade the fortress of the evil CloneMaster to destroy him. A simple but unique combat system makes this game a challenge. Only \$3.00.

Great games.

Far-out ideas.

Beautiful play components.

Low prices.

And you can get them by mail!

**RAID ON IRAN:** A tense tactical game about the attempt to free the hostages. What would have happened if the commandos had reached the embassy? An alternate scenario lets you try to kidnap the Ayatollah! Only \$3.00.

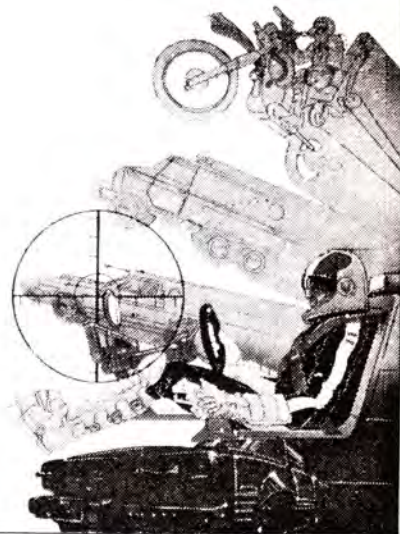
**CARDBOARD HEROES:** Full-color miniatures for any fantasy or role-playing game. These detailed 25mm miniatures make great painting guides for lead miniatures — but they're so good (and so cheap) you may never use metal miniatures again. There are four sets:  
Set 1: Player Characters. 40 figures. \$3.00.  
Set 2: Brigands, Orcs, and Goblins. 40 figures (bad guys for your games). \$3.00.  
Set 3: Half-Orcs, Reptile Men, and Kobolds. 40 more opponents . . . \$3.00.  
Set 4: Animals. 48 assorted beasts. \$3.00.

**THE SPACE GAMER Magazine:** If you play *Dungeons & Dragons*, *Traveller*, *Star Fleet Battles*, *Ogre*, or any other science fiction or fantasy games, this is the magazine for you. TSG gives strategy articles — reviews of new miniature figures and games — designer articles — company news — and much more. And TSG subscribers get free postage on SJ Games orders, as well as other freebies! One year (12 issues) is \$21. Two years are \$39. (Yes, we use a protective mailing cover!) *Non-U.S. subscribers please add \$5 per year for postage.*

*Check your local hobby shop for our games. If you can't find them, we'll be happy to fill your order by mail. (Retail and distributor inquiries are also welcome!)*

**TO ORDER:** Send retail price for all items, PLUS 50 cents postage per item ordered. (If you subscribe to *The Space Gamer* with this order, or if you are already a subscriber, your postage is free.) Texas residents should also include 5% sales tax. Please do not send cash — payments must be by check or money order in U.S. dollars, drawn on a U.S. or Canadian bank. Please allow 3 to 6 weeks for delivery. You CAN charge orders to your Visa or MasterCard (\$10 minimum, please). Include your card number, expiration date, and signature on your order.

## CAR WARS



## UNDEAD



**STEVE JACKSON GAMES**  
BOX 18957-Y  
AUSTIN, TX 78760



# FANTASY Modeling

VOLUME FIVE

## Publisher

RITA EISENSTEIN

## Circulation Director

RICHARD BROWNE

## Editor

PHILIP O. STEARNS

## Art Director

STEVEN J. PLUNKETT

## Managing Editor

STUART MATRANGA

## Associate Editor

RICHARD K. RIEHN

## Contributing Editors

MICHAEL KILBERT

ANDREW YANCHUS

## Associate Art Director

BOB SEFCIK

## Assistant Art Director

LAURA O'BRIEN

## Art Staff

KAREN HODELL

LEIGH GRAU

## Photographer

JOHN CLAYTON

For Advertising Information:  
Rita Eisenstein (212) 686-2830

## ABOUT THE COVER:

**Rick Overton's "54 Ship" orbits Earth and monitors weather conditions. Staff Photographer John Clayton composited this scene using an original shot of the "54 Ship" and a NASA photo. No matte was used.**

FANTASY MODELING is published by FANTASY MODELING INC., 475 Park Avenue South, New York, N.Y. 10016. This is VOLUME FIVE. Content is © Copyright 1981 by FANTASY MODELING INC. All rights reserved. Reprint or reproduction in part or in whole without written permission from the publishers is strictly forbidden. FANTASY MODELING accepts no responsibility for unsolicited manuscripts, photos, art, or other materials, but if freelance submittals are accompanied by a self-addressed, stamped envelope, they will be seriously considered and, if necessary, returned. Products advertised are not necessarily endorsed by FANTASY MODELING, and any views expressed in editorial copy are not necessarily those of FANTASY MODELING. Subscription rates: \$9.99 one year (4 issues) delivered in U.S. and Canada, foreign subscriptions \$12.39 in U.S. funds only. New subscriptions send directly to FANTASY MODELING, 475 Park Avenue South, New York, NY 10016. Notification of change of address or renewals send to FANTASY MODELING Subscription Dept., P.O. Box 142, Mt. Morris, IL 61054. Printed in U.S.A.

# EDITORIAL



Steve Sippin and Kevin Smyth's ship in geosynchronous orbit.

**N**ow that we're embarking on the second year of FANTASY MODELING, we wish to thank you, our esteemed readers, for your enthusiastic support.

As is quite usual with pioneering efforts, we had to feel our way through the dark and wait for your commentary and consensus to reach us, so that we might map a course reflective of your interests. There was, of course, no shortage of advice. And, true to the Biblical saying that "God created man in his own image," many of you were eager to make certain that FANTASY MODELING would be an exclusive mirror image of your own predilections. Sci-Fi fans wanted to see spaceships, more spaceships and nothing but spaceships. Others wanted to see fantasy figures to the exclusion of all else. Needless to add, all are entitled to their space in the Sun, so why do one thing at the expense of all others? If anything, our mail has indicated that many of you developed heretofore unexplored areas of interest because our magazine addressed itself to the full spectrum of the fantasy field. And make no mistake, fantasy covers just about anything that is make believe, notwithstanding the narrow interpretations some of our readers would place upon it. In this respect, any spaceship that stands beyond the limits of our present day technology is every bit as fantastic as Conan's Hyborean Age. And when it comes to the war games, which have been the subject of so much pro and con, a *Star Wars* scenario is no more fantastic than the re-play of a Waterloo scenario that has Napoleon emerge as the victor! Every road that leads to Rome is also one that leads away from it, and which one you choose to travel in which direction is very much a matter of personal purpose. Fantasy is not merely a collection of space age

gadgetry, nor is it all a Conanesque macho trip, monsters or weird Outlandia. Rather, it is all of these and more!

If there is one subject that provided a keynote, it was product information or, rather, the lack of it. Yet, even here, there was one vociferous complaint that we waste too much space on advertising!

This one, of course, is easily answered. Product information is an important ingredient of a hobby publication and there is no such thing as space "wasted" on advertising. The advertiser purchases his space to make his product known and available to you, the readers. If he didn't buy the space, it wouldn't be there. We don't throw out articles to make room for ads. What we do is provide "extra" space for them.

There can be no question that we are interested in commercial product propagation. It is, after all, that which makes the entire hobby go round. The manufacturers and dealers are the ones who make it possible to feed our urges to do interesting and exciting things. They are what food is to the stomach. But our first and foremost business as a hobby magazine is to advance the hobby as a whole, to provide a forum for new ideas and ways of doing things by letting you, the hobbyists, take the floor. In this way, we are a primary medium of exchange, because nothing much ever happens in a vacuum of ideas! On the other hand, it is the manufacturer's and dealer's business to propagate their products and merchandise.

Unfortunately, many requests for product information have come to us from readers who apparently did not look at the ads. What can we say to this?

In closing, we wish to thank you once again for your support and encouragement and may all your efforts bear fruit.



By RICK OVERTON

**C**an I help you?" asks the hobby store salesman, wondering why the young modeler just holds the tank kit box. "Just looking," says the customer as he turns the box top illustration sideways and upside down to perceive the shape differently, possibly to find inspiration for some incredible spacecraft design. The confused hobby store owner has encountered his first kit-basher. Before the kit basher is through, he stacks several tank models, a spaceship kit, a couple of jet fighters in various scales and a battleship by the register.

"I hope you've got enough space in your room for all these kits when they're finished," says the owner, ringing up the boxes.

"I'll be lucky to get one complete model out of these," the young man answers, shelling out the hard earned bucks. The modeler leaves the shop with the basic components for an almost completely original design.

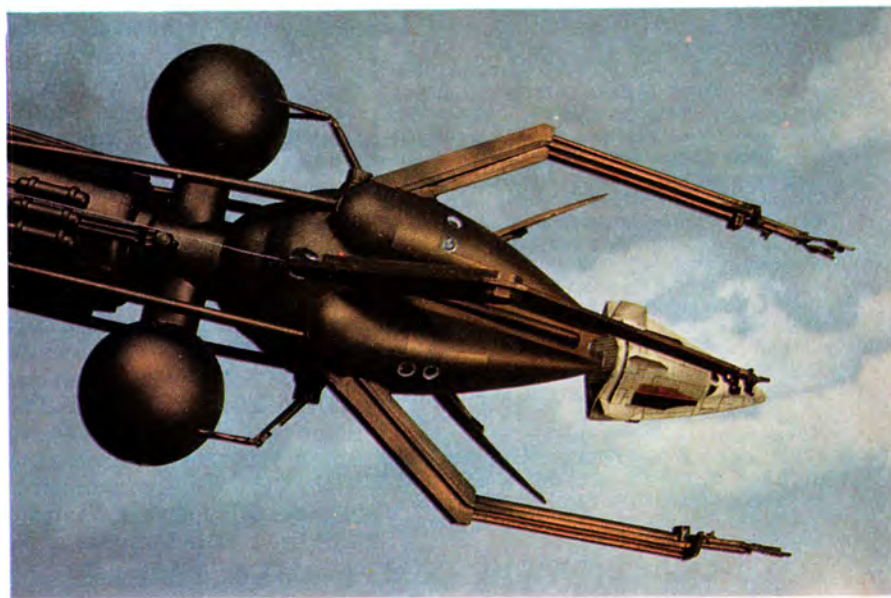
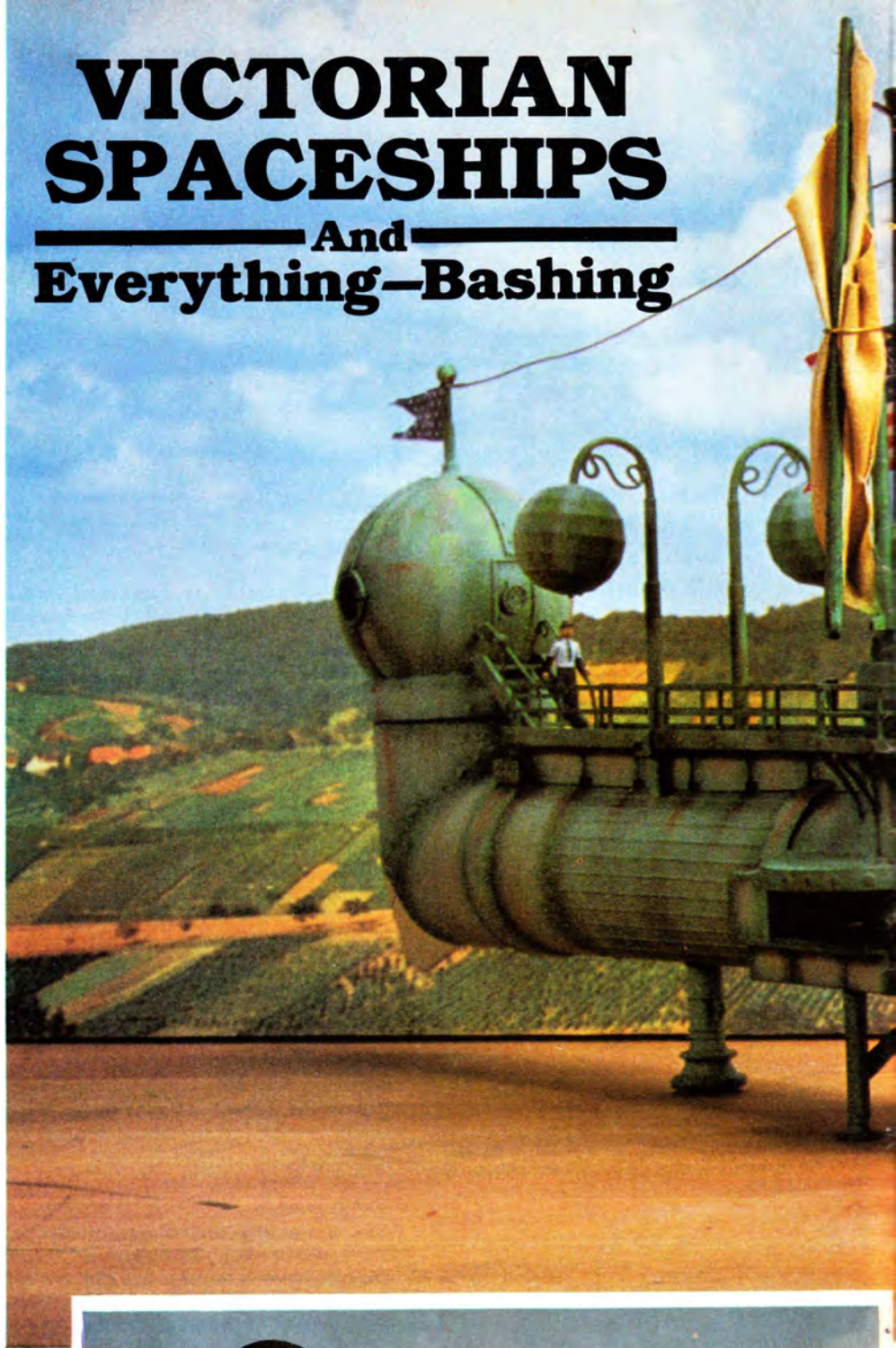
Kit-bashing is a relatively new art form (if you don't consider modeling in general an art form, then you should see the work that the masters create in Hollywood for film. If you don't think it is a profitable art-form, you should see the houses these master modelers live in.) Kit-bashing allows the modeler free reign to be the designer, the architect, the artist. More than likely, you (the modeler) will encounter the dime-store critic. This is a (luckily) rare species that thrives on the imaginations of others. He, or she, can usually be found criticizing an air craft or tank model: "the colors are all wrong . . . the rigging's too loose . . . the oleos weren't greasy enough . . ." But now there's new territory to criticize, scratch-built sci-fi and fantasy models. They'll try to find something wrong with it: "it would never fly . . . the radar dish is too big . . . it looks stupid because I've never seen anything like it in science class before . . ." Sounds like jealousy to me. Science fiction modeling has its roots in existing technology, but it is still an art form and for that reason it is interpretive. This affords you endless possibilities, shapes, colors and dimensions. Artists like Chris Foss, Angus McKie, Vincent DiFate and Peter Elson, to name a few, have been a great inspiration to me with their wonderful designs. Some of my work was covered in the premiere issue of FANTASY MODELING. My "derelict tanker" and "light explorer with scout" were inspirations of the aforementioned artists.

They were also primarily kit-bashed. More recently, however, I've found that using *kit* parts and shapes, alone, too limiting. I'm on a Jules Verne-ian kick now, and there just weren't enough models to fill the demand for Victorian-

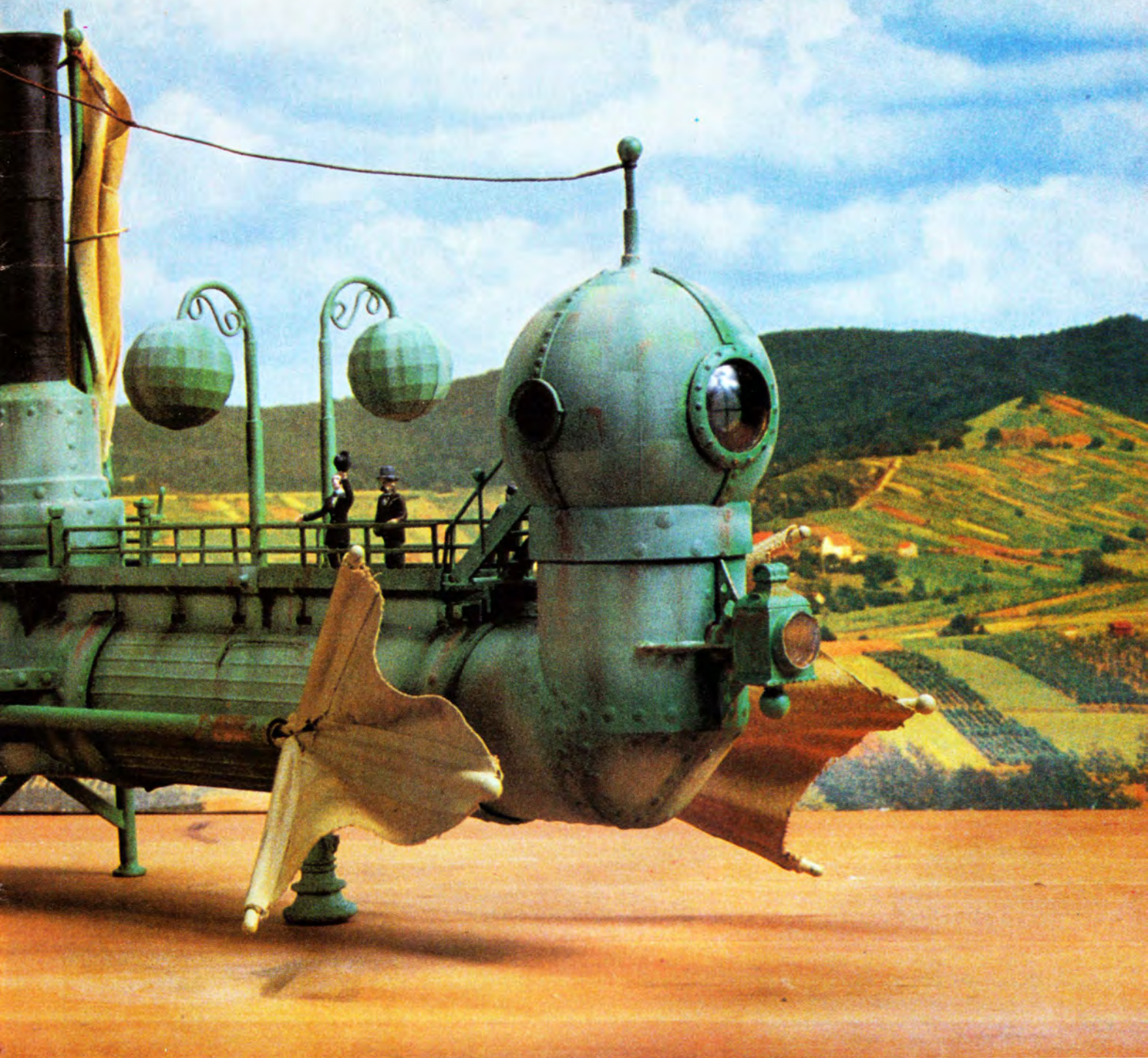
# VICTORIAN SPACESHIPS

---

## And Everything-Bashing

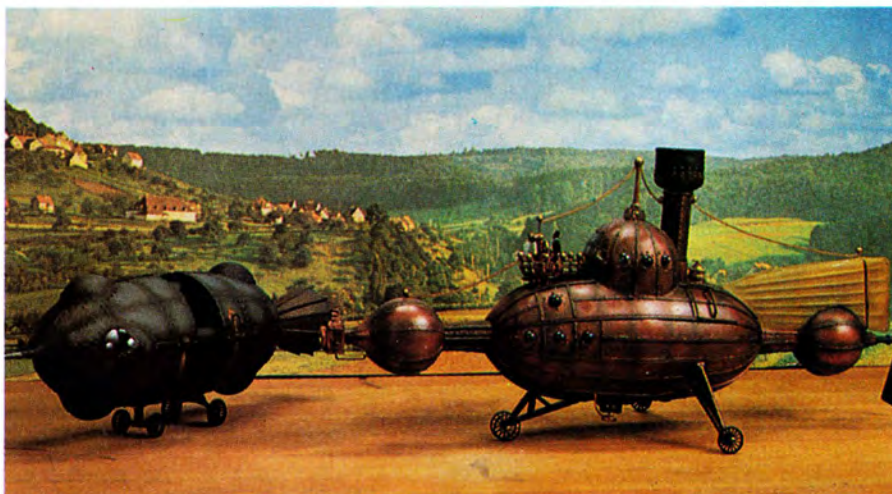






**Clockwise from left: The Serpentine swallows a shuttle; The Green Goose; The Bronze Puffer and the Iron Shuttle.**

looking parts. I started to look elsewhere. The grocery store has a section for toys where some interesting shapes and functions can be discovered for not too great a cost. Be sure they're made of styrene or something close because if the plastic is a pliant hard-rubber it's going to be very difficult to glue. Shampoo bottles make wonderful ship hulls and come in an endless range of geometric shapes, most of them glueable plastic (I use hot-stuff or crazy glue). My Serpentine is made from Body on Tap shampoo bottles (the center section







PHOTOS: PHILIP O. STEARNS/MODELS © 1981 RICK OVERTON

**The alien Serpentine ship was scratch-built from ping pong balls, brass tubing and other shapes.**

from a toilet bowl cleaner called Bowlene). The dome is the top of a capsule containing, if memory serves me correctly, a smiling face decal. It was purchased for a mere 25¢ from a bubble gum machine-like apparatus at the same grocery store. This dome is very handy and not easily identifiable. If all the parts on your ship are easily recognized you'll be easy prey for dime store critics: "this is from a panzer tank . . . this is from a cylon fighter . . . this is off the foxbat . . ." and so on.

Some part-identification is unavoidable, but the more original, the better. Many parts can be paired and reshaped just enough to give the appearance of being completely scratch built. The Serpentine's radar dish is actually made from R2D2's blue plastic head panels. The inner, convex portion of the radar dish is an observation dome from the Cygnus. They're mounted to the main dome with 1/48th scale crusader main landing gear legs. The insect-like nose is made from the tail section of the

1/144th space shuttle piggy-backing a 747. The Serpentine won 1st place at the IPMS Nationals, July 1981 in New York, making the components less recognizable really helped.

\* \* \*

I got into building Victorian models partly because I was so impressed with the work of photographer-modeler Michael Sullivan, to whom I've dedicated a model also featured in the premiere issue. I'd always been amused by footage of early flying machines,

## RICK OVERTON

**R**ick Overton, aside from being a talented modeler, is also a professional stand-up comic. He travels all over the country—especially the east coast—performing his stand-up routines. Last year he signed with International Creative Management (ICM), one of the country's leading talent agencies. He also did a pilot of a program called *The Road Show* for NBC with John Candy, the now famous comic who received his original national exposure with the Second City comedy troupe. Overton spent a week on Willie Nelson's bus touring the southwest United States with Candy and several other young comics to make the pilot. Although *The Road Show* was not a successful pilot (it never became a TV series), Rick is optimistic about his future and confident that his talent will be recognized.

Rick is one of the few comedians who perform science fiction comedy. His regular stand-up routine usually contains some hilarious references to the latest science fiction movies, and he has an all-science fiction routine that he performs for science fiction conventions. Last year he was the M.C. of the CINEMAGIC/SVA Short Film Search awards ceremony, which is sponsored by FANTASY MODELING's sister magazine, CINEMAGIC. His SF humor had the audience rolling in the aisles. His modeling work was previously featured in the premier issue of FANTASY MODELING. He also made the models for a science fiction film entitled *Target Earth* (no relation to the original production in the fifties by that name), which has been aired on a few local television stations. Victor Buono played the leading role in the film.

Rick's particular avenue of artistic expression in modeling is creating Victorian spaceships from all sorts of improbable components. Plastic wine glasses become the fuselage of a menacing-looking Victorian ship that

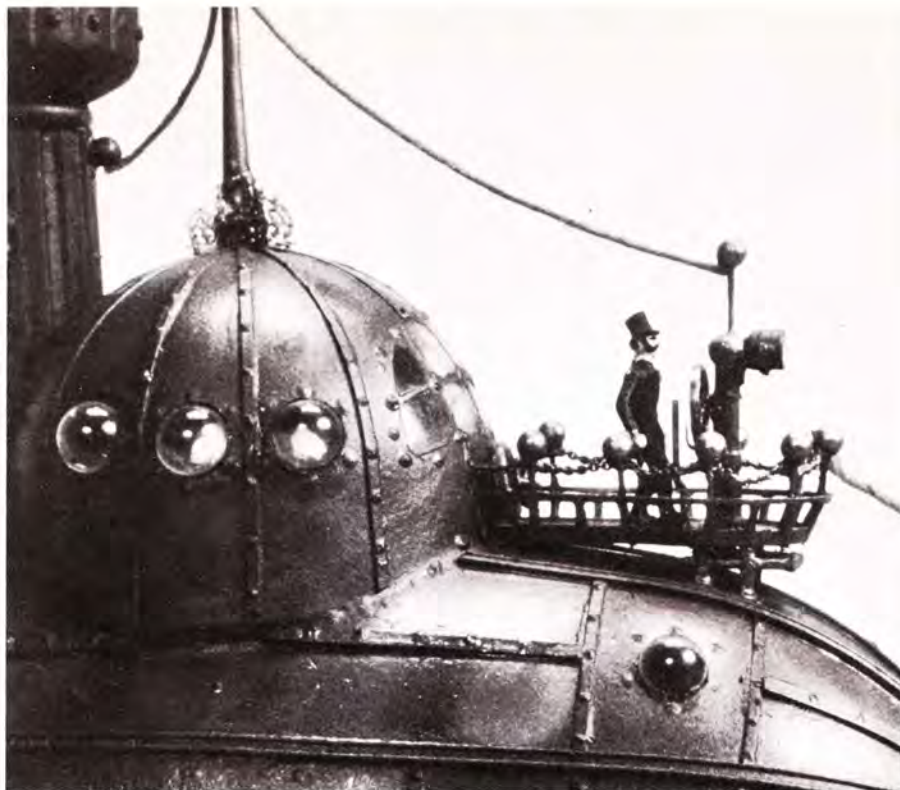
resembles a flying one-man sub. Shampoo bottles inspire Rick to create strange alien spaceships based on the geometric shape of the shampoo bottle and embellished by Rick's wild imagination. Some of Rick's other Victorian ships appear in FANTASY MODELING 1. One, suggested by a variety of octagonally shaped pieces of clear pieces of plastic that Rick picked up in a plastics supply house in New York, is named after fellow modeler Michael Sullivan, whose work has been an inspiration to Rick.

When Rick isn't on the road, he performs at New York's Improvisation, one of the country's leading comedy night clubs and a leading proving ground for young comic talent. The Improv's slogan, "Hell's Kitchen to Hollywood" has proven true for many comics who worked there during their formative years and whose names are now household words. Rick recently flew to California to participate in a "Comedy Laughathon," which was syndicated on cable television. He may have to make California his permanent home for a few years because his agent wants him to live near Hollywood to be available for movie and television casting. He's reluctant to leave the intellectual atmosphere of New York, but his career dictates that he make the Hollywood scene. Since he performs at night, his days are free for modeling (and casting calls and sleeping.) Some of his creations take months to complete, because he puts so much care and precision into them. Rick hopes that he may find a dual career in Hollywood as a comic actor and special effects model builder. If talent's the main ingredient of success, he's a shoe-in.

—By John Clayton



the now famous Venetian blind-winged airplane, collapsing on itself, or the VTOL shop test with an umbrella oscillating up and down, bouncing the poor pilot into homogenization. I try to give my models this humorous Rube Goldberg technology. Things that just hissed and bounced on the ground, scaring the ground-crew away. My Green Goose paddles along with its webbed sails (I got the idea for this one from an old Czech movie *The Wonderful World of Jules Verne*, 1962. Remember the animated cut-out lithograph models?) The hull is made from toy periscopes puttied and sanded so that the joints, except the ones you want to show, disappear. The cabin spheres are from the Lindberg "Lunar Shuttle" kit. Holes were drilled for the port-hole windows which are actually HO House accessories. These and many other terrific Victorian ornaments and figures can be obtained at any good train hobby store. The smoke stack is from the Monogram Susquehanna side wheeler kit. I'd studied several bronze-sheeted roof tops in downtown New York to get the proper shade of oxidized green. The green seemed to darken by any support strip and be streaked much lighter on the flat surfaces. My airbrush gave me a pretty faithful reproduction of the weathered bronze sheeting. Rust was streaked in afterwards with a stencil and a lot of dry-brushing. The rivets on this model, as in the case with the others in my collection, were made with micro-scale Kristal Kleer applied with a toothpick. The football shaped bronze puffer is made from two plastic wine cups. At the ends of the stems are ping pong balls. Another smiling face button capsule was used for the dome. Strips of plastruct of different widths were glued to the hull to simulate external structural bracing. I sprayed several coats of patina copper and then bronze along the external strips to show weathering.



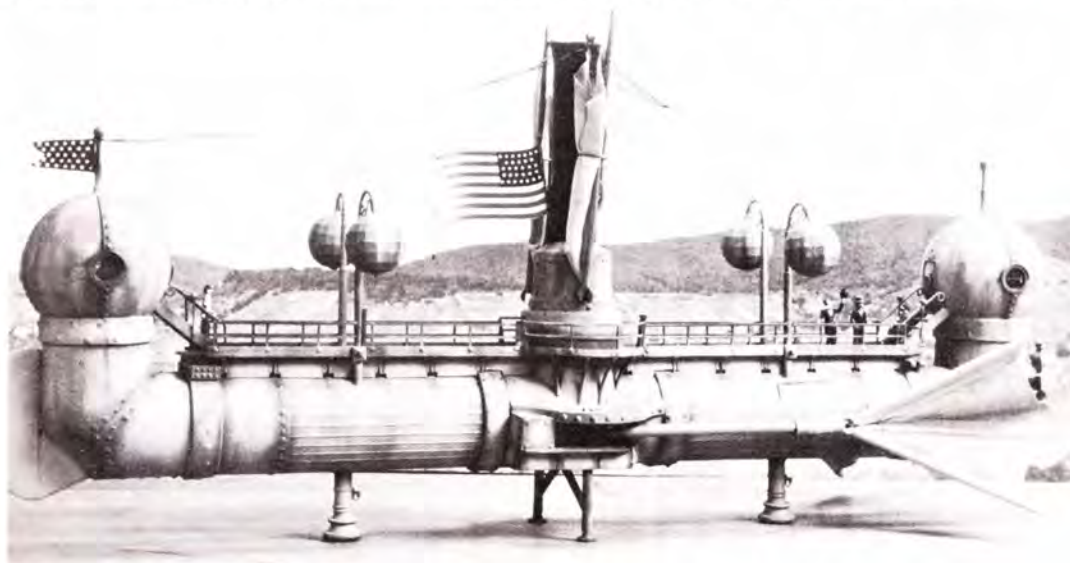
**Detail of Bronze Puffer shows gelatine capsule windows.**

The wheels are from HO Hansom cabs and buggies. The Victorian Space Shuttle is also made from two wine cups with the bases separating the halves. The blisters on the hull were vacu-formed with the old Mattel unit. If you can find a working one for any reasonable price, borrow the money and buy it! The bug-eye windows were inspired by Harper Goff's brilliant, and now classic, rendition of Captain Nemo's Nautilus for Disney.

\* \* \*  
The point of this article is to illustrate that if you want to go into new areas of model building, but the parts-box holds nothing useful, start shopping around, grocery stores, model train shops,

hardware stores, arts and crafts stores . . . even the dime store (but watch out for critics). Use your smarts, use your imagination, combine materials: wood, plastic, metals . . . super glues will stick anything to anything (put your kid brother down, your wall is cluttered enough as it is). If there is one thing I've learned about modeling since the premiere issue article was written, that is to look everywhere for material and inspiration and everything-bash.

My models are on display in midtown New York at Gateway Hobbies on 38th St. The folks there will be happy to help you with any hobby needs. Their selection and quantity of kits are a kit-basher's dream.



**The main shape of the Green Goose is created from two toy periscopes. Model railroad parts add detail.**



# BUILDING A DUNGEON DIORAMA

## Notes On The Making Of A Ghastly And Gruesome And Award-Winning Diorama

By PHILIP O. STEARNS

I have always been a great devotee of the talents of Tim Richards of Phoenix Model Developments and Cliff Sanderson, particularly, when these sculptors set their creative talents into the fantasy field. Last April, when I was in England, Tim and Brian Marlow presented me with their latest releases among which were a series of five new figures purporting to be a continuation of Phoenix' "Atlantis" series. These were indeed a far departure from the ordinary and instantly fired my somewhat overactive imagination to create a diorama involving these five protagonists; Grossenwulf the inquisitor, Zolda the ancient witch, Ogash, the miserably wasted wretch, a seated female prisoner and a very luridly clad female guard. It must be said that these personages encompass everything from the sublime to the ridiculous. However, having avidly painted them, the question arose of how best to present them.

I feel certain that many modelers are like me and have drawers or cupboards full of kits and figures that have been acquired with the full expectation of painting them, but time and new purchases tend to divert one's attention. However, when a diorama idea strikes one, a search through the many boxes of unpainted material always proves fruitful. Thus it was that I retrieved a number of appropriate spares including a standing female prisoner, a black panther, a serving wench—all from Phoenix. And as I searched, I found all manner of hapless female victims from Cliff Sanderson including three of his latest releases in the form of Nubian guards. Then, on a recent visit to Mike Kilbert at The Complete Strategist in New York I happened on some of Tom Loback's bits and pieces created for his 25mm Dragon Tooth series, which somehow managed not to appear out of scale with the 54mm figures. The brazier in the foreground was from



The completed scene minus the three Nubian Guards ready for lighting and placement in the box.

PHOTOS: PHILIP O. STEARNS



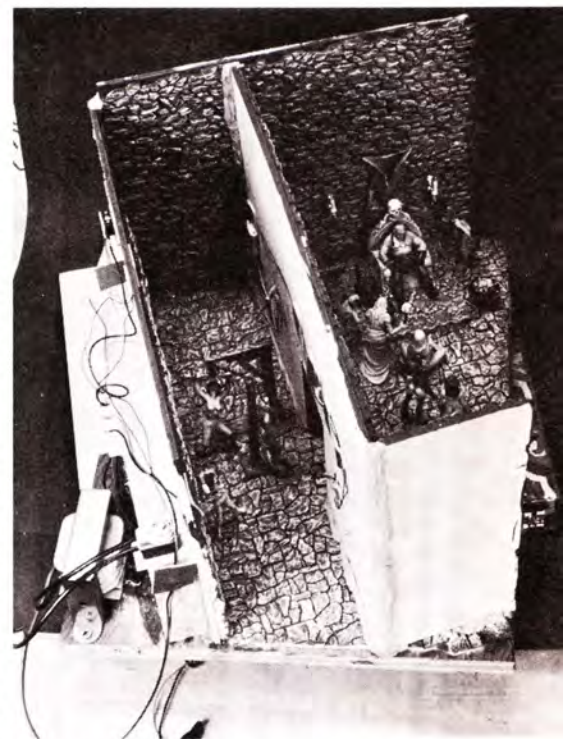


Citadel Miniatures which I acquired when covering the Ral Partha story in the last issue of FANTASY MODELING. In any case I now had most of the elements assembled and painted but now came the real nitty gritty of the proposition; how to assemble them into a cohesive story telling setting.

From the outset the very nature of the ugly, threatening Grossenwulf suggested a dungeon with its evil master dealing out punishment of a dire nature to his unfortunate victims. That presented the problem of a large mass of stone work on walls and flooring. Fortunately, Cliff Sanderson had sent me a series of molds of various scales of stone work which we were investigating for the most economical way of merchandising. Seizing upon three of these I experimented with various materials in which to cast these pieces. First, I tried A + B Putty which worked admirably, but covering the larger areas would end up making the box far too heavy and far too expensive. Next, I tried ordinary artist's plaster of Paris which proved far too brittle and easily breakable. I then tried a harder material in the same fam-

**The judgement of the prisoner by the hated Grossenwulf while another victim awaits her fate.**

ily called Hydrastone. This was more efficient than the plaster and came in assorted colors, but was still very expensive. Then a fellow modeler and writer, Andy Yankus, suggested Durhams Water Putty which he uses to fill in plastic bases to give them bulk and rigidity. I tried it and, after some false starts in mixing it, I found it to be the ideal material. It is a form of plumbers putty which one mixes with water in its powdered form and smears into the molds with an artist's palette knife. The only care that must be exercised in the control of the mixture are the proportions of powder to water. Roughly speaking start with two tablespoons of powder to half a teaspoon of water. Mix this thoroughly and if additional water is needed, do it with an eye dropper. A little practice and you will become expert with every try. The sections of all and flooring from these molds interlock on four sides enabling one to create large areas which can then be glued into position



**Locking down on the scene showing the wiring system.**



on ¼ inch plywood board which gives one a light rigid setting for the diorama. A + B Putty was the only filler used at the join of wall to wall and wall to flooring. The plinth and columns for the door were also constructed from A + B. The base of the diorama was constructed on a piece of ½ inch plywood for rigidity. Having completed the floor and wall areas I next tackled the lighting problems.

I decided on a 12 volt system using primarily grain of wheat bulbs. I purchased four wall sconces from a doll house shop for the main chamber and placed four bare bulbs taped to the walls in the second chamber. Holes were drilled in the appropriate places and wires passed through with the sconces set in place with A + B Putty. So far only grain of wheat bulbs had been used but now I thought of a trick which might add a little color as well as villainy to the scene by including two L.E.D.'s in the barzier. Holes were drilled through it and the floor and the wires passed under the floor to a micro-potentiometer and then to the terminal. I now had twenty wires for ten various fixtures to sort out and lead back to a basic terminal. All this was done by soldering extension leads and making certain that all the lights were con-

nected in parallel. All the lights were then connected to a 12.6 Volt 1.2 Amp transformer. All these circuits were tested and found to be working properly.

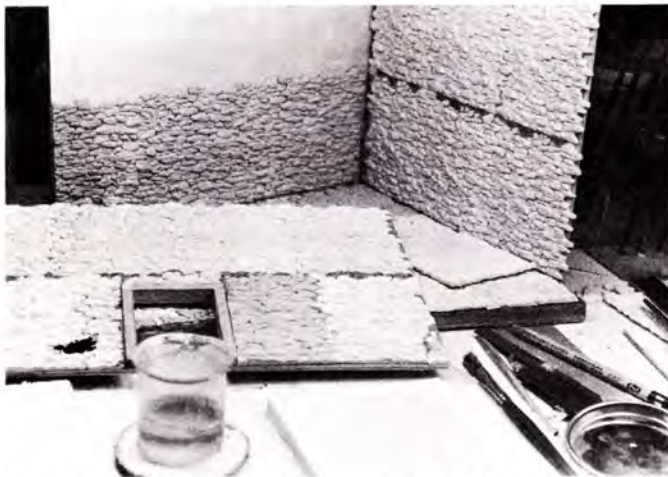
Now it was time for the final location of the figures in the scene and the final anchoring of the rear wall. First, the slightly raised throne platform, the throne and its silvered backing piece, the figure at Grossenwulf and the panther were all cemented in place with A + B Putty. All the figures had holes



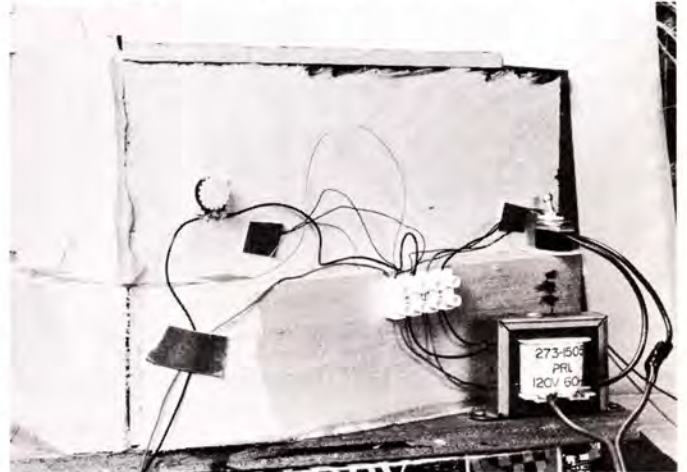
**The rubber mold for a section of wall filled with Durhams Water Putty.**

drilled in either their bodies or legs for the insertion of brass rods which were in turn placed in locating holes drilled to the floor and then cemented in place with A + B Putty. I never ceased to be amazed and delighted with the countless uses of this marvelous material. The containing box for the diorama was made from ¼ inch plywood and the positioning supports were then screwed into its sides. The box was then painted black both inside and out and was now ready for the test insertion of the diorama. Two holes were first drilled into the rear and far side of the box for a switch and the AC wire to the transformer. Once the diorama was in place and the electrics connected, the lighting effect became apparent. Although reasonably dramatic it was obvious that additional fill in lighting was required. The interior black velvet covered baffle was then constructed and was used as the platform for two CM 1815 Mini Bayonet bulbs. These were connected to a mini jack and then to a 500 ohm 5 watt potentiometer to enable the dimming of these lights to the appropriate degree. These lights were then connected to the transformer, the switch was turned on and Hallelujah! Everything worked.

I might just say at this moment that I



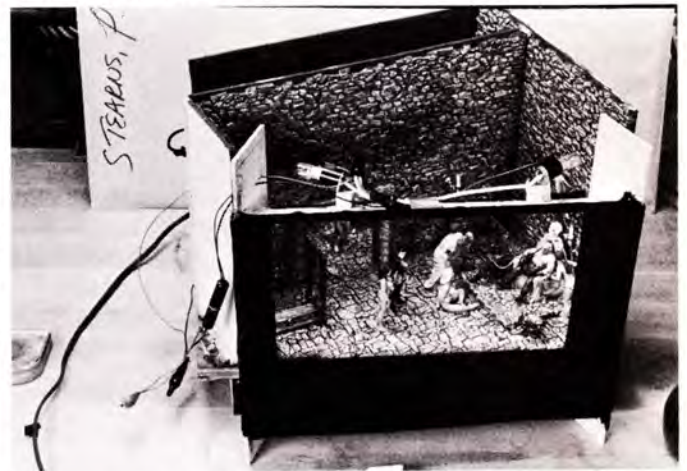
**Sections on floor and wall assembled and ready for painting.**



**The transformer, the terminal, the potentiometer and the switch wired and ready.**



**The mini jack for connecting the overhead lights on the baffle.**



**The overhead lighting to fill in the sconce lighting in the scene.**





The completed diorama with its box and switch and the front covering frame.

learned a great deal about electrics by trial and error, and not without a few blown bulbs and potentiometers before I finally understood the sequence of flow for electricity. Here the advice of two good friends, Dave Reed and Shep Paine, kept me from electrocuting myself. I must say that once you have grasped the technique of lighting a diorama to your satisfaction it is indeed a gratifying experience. The only remaining problem for solution was the frame and matt for the front of the box. Normally, I trot myself off to a do-it-yourself framing shop which usually ends up as expensive as a regular frame shop. However, while wandering through Woolworth one day I spotted some absolutely ghastly little oil paintings which strangely enough had some rather splendid looking frames about them. To my astonishment these sold at only \$15, far less than my do-it-yourself effort would have been. So I rushed home with one of these, expunged the painting, added a simple black matt and a small brass plaque with the title engraved upon it and my rather lurid diorama was completed.

I would like to close with a few comments on the resources for various items more commonly used in the construction of boxed dioramas. First of all Sheperd Paine's book, *How To Build Dioramas*, published by Kalmbach Publishing, 1027 North 7th Street, Milwaukee, WI 53233 is an absolute must, and it is the modeling bible to which I constantly refer. It contains a complete list of useful bulbs, transformers and lighting diagrams as well as other materials and methods of construction. Most electric gadgetry can be found at Radio Shack or other electronic supply stores. You should make a list of exactly what you want, because, unless you know, the sales

persons are not much help. Make yourself a little circuit tester with an 18 volt bulb and socket with two wire leads with small alligator clips which you will find of immense help when working out your electrical systems. If you do not live in a large urban area there is the American Science Center, 5700 Northwest Highway, Chicago, Illinois 60646 which carries every conceivable electronic, optical, medical and scientific gadget including front faced mirrors and fiber optics, all at very reasonable prices. Write to them for their vast catalog which is only 50 cents. Another invaluable catalog is the Brookstone, 127 Vose Farm Road, Peterborough, New Hampshire 03458. This firm carries every kind of miniature tool, as well as A+B Putty and their service is excellent and very fast. A+B Putty and Paste is also carried by The Military Shop, Lakewood Shopping Center Mall, Store 128, 5234 Pepperwood Avenue, Lakewood, California 90712 along with a very complete listing of miniatures in their catalog. Phoenix Model Developments figures can be purchased from their US distributor, Corporal Tuna's Supply Co., 855 Mayfair Road, Akron, Ohio 44303, while Cliff Sanderson figures are available through Monarch Miniatures, P.O. Box 4195, Long Island City, New York 11104. The paints I use are Windsor Newton Artists Oils, Pelikan Plaka, and Liquitex all of which are available from any good art supply store. One last thing, the brushes you use to paint your figures are the most essential pieces of equipment. I use only Windsor-Newton Series 7, No's 1, 0, and 00 which are very expensive but if taken care of properly will last for years. Do not use these for painting scenery or landscape for this will ruin them. You only need inexpensive brushes for that kind of work.

## Runequest

AWARD WINNING GAME!

At every convention and in many letters, people constantly praise **RuneQuest** for its realism and logic. Character skills are rated on a 1-100% scale. Full of illustrations and examples, **RuneQuest** is a joy to learn and play. The **RuneQuest Book** contains all of the information needed to play a full game except the dice. The **RuneQuest Box** contains the rules-book as well as an introductory role-playing game, all dice, beginning scenarios, pre-generated monsters and characters, blank character and monster sheets, and a full-color box. Everything needed to play immediately is included, including the fantasy world of Glorantha. Start adventuring today with the best in role-playing. The book sells for \$12 and the box for \$20.

## Wyrm's Footnotes

For **RuneQuest** players, there is now a magazine just for you. **Wyrm's Footnotes** brings you the latest and most up-to-date information on **RuneQuest**, the fantasy world of Glorantha, and on what's coming from Chaosium Inc. Single issue price is \$2.25, one-year subscriptions (6 issues) are \$12, a \$1.50 savings!



**CHAOSIUM INC.**

BOX 6302-FA, Albany, CA 94706

Add \$1 for shipping when ordering.  
Write for free catalogue.



# CANCELLED PROJECT

## The Kits That Never Were

BY ANDREW P. YANCHUS

**T**here are many model related activities that plastic kit builders enjoy besides actual building. These include accumulating unfinished kits, criticizing new releases to the point where all kit manufacturers appear to be total idiots and griping about the seemingly endless duplication of certain subjects. "What, *another* P-51 Mustang!?" But surely, above all else, the modeler's favorite pastime is dreaming about what new kits should be introduced. "The Green Slime would be a terrific kit! They should have done Kronos by now!" Unfortunately, not all dreams can be fulfilled.

The desires of the enthusiastic model builder and the economics of the hobby industry are often diametrically opposed. With development and tooling costs over the hundred thousand dollar mark, only the subjects that have great appeal and long life can be committed to major kit programs. This sometimes gives the impression that the manufacturers are cold-hearted villains with little imagination, no sense of adventure and only dollar signs on their minds. In truth, almost every kit manufacturer tries to maintain a balanced line. The staples are a must; Me-109's, Chevy Corvettes, and Sherman tanks will continue to sell for all time, and will help support slower moving items. But the market also demands fresh ideas, and kit manufacturers are always trying to find new subjects that will be well received and will give them a unique advantage over their competitors. Plastic kit manufacturers have to be dreamers, crystal ball gazers, and gamblers. It can take nine to twelve months, or more, to get a new kit into production, and if the kit planners guess wrong, their mistakes will be costly.

There have been plenty of bad choices made in the plastic kit field. Hundreds of different kits have turned out to be sales disasters. But mistakes can sometimes be caught before expensive tooling is completed, or production started. Trade shows, opinion polls, and market testing can point out weak spots in new product lines, or indicate stronger areas to head into. Then again, a competitor might get a similar item on the market sooner. A craze that inspired a new kit can end abruptly. Or, sales of similar kits might start to fall off.

Such forces have caused the non-appearance of dozens of officially announced new plastic kits. Revell's Prince Valiant, AMT's Strategic Space Command series, and Airfix's Starcruiser 2 are among those kits forever lost to

modelers, except for occasional glimpses caught in the limbo of old catalogs and press releases.

Ah, but for every announced kit that failed to appear, there are dozens of others that the public never knew were even being considered. Every kit company has files full of development drawings and closets full of mock-ups and tooling patterns for new kits that never came into being. There are even completed molds collecting dust in some warehouses, never used because of abrupt changes in marketing plans.

Aurora Plastics was one hobby company who's experiments in the plastic kit field were bold and very innovative. Many were successful; some were not. A few were silly; others were highly controversial. Many modelers thought that Aurora's kits were "kid stuff," but there were others who relished those same kits and knew that the company was ahead of the times. Unfortunately, the mix-

ture of new kit ideas and varied public opinion often failed, and "New From Aurora" was superseded by "Project Cancelled" many, many times.

As a member of Aurora's Research & Development team, I was one of the people responsible for initiating new ideas and watching over new products progress from first design sketches to production start. I was one of those company dreamers who, it was hoped, reflected the desires of a large number of model builders. Here now, for the first time anywhere, is a look at some of the monsters, heroes, and science fiction vehicles that we dreamers at Aurora wanted to do in kit form.

### THINGS THAT CAUSE SHRIEKS IN THE NIGHT

One of Aurora's boldest steps outside the traditional plastic kit subject matter of airplanes, cars, ships, and tanks, was taken in 1962 with the introduction of the first kits based on movie monsters. Monster kits and Aurora became synonymous, and the company produced various unassembled styrene creatures for sixteen years! (See FANTASY MODELING No. 2 for a detailed account of monster kit history.) On the whole, the monster kits were very successful, but some items proved to be too controversial and had to be discontinued, and caused other projects to be cancelled.

"Madam Tussaud's Chamber of Horrors" was a series started in 1964, but only one kit was ever produced, a







Several proposed Aurora kits are shown in this montage of development drawings by Dave Cockrum (in clockwise order): Robby the Robot; Alien

Warrior from an all-original SF series models; Martian War Machines; Gort; Stegosaurus; Loch Ness Monster; The Phantom; Metaluna Mutant; The Fly.

ARTWORK BY DAVE COCKRUM



Guillotine which included a victim that could lose his head. The kit sold well in France, but it was a bit too gruesome for the American public. Plans for other kits in the series—The Rack, Gallows, and Electric Chair—were abandoned.

The negative reaction to the Guillotine kit in 1964 was nothing compared to the outcry over the "Monster Scenes" produced in 1971. The original concept behind this series of kits seemed innocuous enough—provide the builder with all the elements needed to recreate, in miniature, the "classic" situations found in all the old horror movies. Mad scientist, monsters, heroes, heroines, lab equipment and dungeons full of torture devices were all intended to be parts of the ongoing series. But trouble set in early, and it never left.

Even when the planned initial release of six kits was increased to eight items, all the "cast" and "props" needed for a fully founded presentation couldn't be included. There just wasn't the time or the money to do more than eight kits for the first release.

But Aurora needed more than a hero to quell the cries of "sex" and "sadism" that erupted from parents who misinterpreted our aims with "Monster Scenes." Three kits of the second series were already in production (and released in small numbers) when the decision came to yield to public demand and forsake the entire series.

The eleven kits that were released consisted of several well known monsters, a mad scientist, a female victim, a giant insect, some lab equipment, and two torture devices. Molds for the next two kits were more than 90% completed when the project was cancelled.

Noted comic book artist and illustrator, Neal Adams, was involved with "Monster Scenes" from the beginning. He did most of the artwork for the humorous instruction sheets found in the first kits, and he came up with design drawings for several future releases. Besides the hero, there was a second female victim, the traditional black-hooded executioner, a rack (the Tussaud series was not forgotten), and a most spectacular, large size King Kong!

After the failure of "Monster Scenes," Aurora stayed away from new monster kit releases for many years. During that time, we tried to formulate the most perfect, totally acceptable way to re-enter the category. Different approaches were considered and rejected. The final form, unleashed in 1975, reduced the kits to simple, snap-together items featuring the best known monsters. Although some "Monster Scenes" tooling was used, the new series, "Monsters of the Movies," completely eliminated everything that could be misconstrued as torture, sex, blood, or gore. Maybe we sanitized

these kits too much, or maybe the public was just tired of miniature monsters, for the kits didn't sell very well at all. Monster kits in one form or another had been strong staples for Aurora since 1962, but in 1975, even Dracula, the Wolfman, and the Creature from the Black Lagoon couldn't keep "Monsters of the Movies" from becoming fallow.

We had expected these monster kits to be the start of a bright new future, and many follow-up items were in various stages of development when the series fizzled out. Hand made patterns were completed for several old favorites in all new, snap-together models. Erik, the Phantom of the Opera, was unmasked by the lovely Christine; the Mummy shuffled past a statue of Anubis; Godzilla attempted to rip Tokyo Tower from its foundations. Some characters never kitted before—such as the Fly and the Invisible Man—were also on the drawing boards. Non-movie creatures, including the Loch Ness Monster and the Abominable Snowman, were also being planned.

**The Phantom**



## SUPER HEROES/ARCH VILLAINS

Aurora was one of the many companies that cashed in on the Batman craze that swept the nation in the mid-60's. But Aurora had a head start over all the other merchandizers of Batman products, due to the happy coincidence of starting a comic book hero series of kits about a year and a half before the Batman TV show debuted! It was one of the few cases where being ahead of the times paid off for Aurora.

The comic book kit series naturally started off with Superman, the "Man of Steel" who spawned a legion of super powered, costumed crime fighters. The Superman kit proved that there was a ready market for more comic book types, and Aurora followed-up with kits of Batman and Wonder Woman. There was also a kit of Superboy (the teen-aged Superman), but family ties weren't strong enough to get the proposed Supergirl kit into production.

When Batman started to rock and sock his way across America's TV screens, business began to boom for all

comic book characters and related merchandise. At Aurora, the Batman kit went into around-the-clock production, and more bat-related items went into development. The Batmobile lead the pack, and it became one of the top selling plastic hobby kits of all time. Orders for over one million kits were in hand even before the tooling was completed. To meet the demand, and in order to double production, Aurora was forced to start a second set of molds while the first set was still being finalized. Other Batman kits followed in quick succession, for a total of seven heroes, villains, and vehicles.

Other comic book characters bene-



**Ming the Merciless**

fitted from all the attention given to Batman, and Aurora continued to expand its line with other super heroes, notably Spider-Man and the Incredible Hulk. Another, more involved Superman kit was also thought to be a good move, and several different designs were put on paper—Superman rescuing a bound Lois Lane from some railroad tracks; Superman stopping a bank robber; Superman battling an alien menace. The influence of the Batman show was too strong. Superman's kit succumbed to Batmania.

The problem with nation-wide crazes is that they usually die abruptly. When the Batman TV series had run its course and disappeared from the network schedule, sales of Batman toy and hobby items took a supersonic nose-dive! Needless to say, there were several Batman kits in various stages of development when the series came to an end. The Batcopter, in reality a Bell 47 with bat-wing additions, was ready to go to the mold makers. It was a loss to aircraft modelers as well as to bat-fans, because no accurate plastic kit of this historically important type of Bell helicopter has ever been produced.

It is said that everything runs in cycles, so it was no surprise that Aurora reintroduced the comic book hero kits four years after the demise of the first offerings. Because the kits were basically



straightforward reissues with the addition of specially prepared, full color comic story/instruction books, a large initial release of eight kits was possible. Two additional reissues followed, and totally new kits were planned for the future. The first orders for the new kits, called "Comic Scenes," were great; stores reported strong sales during the first several weeks, despite the fact that the kits were introduced in a period that traditionally meant poor sales for all hobby items.

**The Rack**



The first two totally new kits for this series were of characters that had their origins in newspaper comic strips—The Phantom and Flash Gordon. Revell had produced kits of these heroes some years earlier, and Aurora's first attempt was to lease or purchase the old Revell tooling. When Revell refused to give up their molds, we at Aurora decided to do our own kits, and blocked Revell from reissuing theirs.

Two of the artists responsible for the comic books included in the first "Comic Scenes" kits, Dick Giordano and Dave Cockrum, were given the job of designing the new kits. Giordano's model sheets of Flash, and his arch enemy, Ming The Merciless, were based heavily on Alex Raymond's original comic strip. Bill Lemon sculpted the figures, and set up the base so that the two adversaries could be sold in one kit or as two separate items. Ray Meyers turned Cockrum's Phantom drawings into an excellent three-dimensional model that overwhelmed all of us.

Regrettably, these were two more models that would never get into production. The success of "Comic Scenes" was surprisingly short lived, and I'm still not completely sure why. But I do believe that the large scale figure kit market, supported mostly by youngsters, got chopped down by "action figures"—dolls for boys produced by the toy companies. When fully assembled, clothed, and articulated dolls of heroes could be bought for about the same price as kits that had to be painted and assembled into a fixed pose, the kits lost ground.

### **ROBOTS, ALIENS AND STARSHIPS**

Aurora's flights of fancy were not

limited to movie monsters and comic book superheroes. Aurora kits spanned the ages from prehistoric times to the far future. In each category there were successes and failures, and additional kits that never got off the ground.

2001: A Space Odyssey was represented by two kits—the Moon Bus and the Pam Am Clipper, Orion. Had the classic film been able to support interest in three hobby kits, the Jupiter probe ship, Discovery, would have been next.

Aurora produced a kit of Star Trek's Mr. Spock, but ran into licensing problems that limited their Star Trek production to foreign markets. Captain Kirk fell victim of the deal.

The Robot and the Robinson family that were "Lost In Space" provided Aurora with subject matter for three hobby kits. Other scenes made up of the Robot, the kids and their alien pet were also considered before the final selection was made. However, the most requested kit from this series, the Robinson's Jupiter 2 spacecraft, was rejected by Aurora's management because it was too "plain and simple".

As the cycles repeated for monster and hero kits, so too did science fiction get another big chance. Among the many plans underway around 1974 was one to establish a permanent science fiction line that would combine reissues of old Aurora items with new

kits of subjects from old classic films and new releases. A master list of figures and vehicles was made up, and a tentative order of release was formulated. The original plan was to combine new and old kits right from the start, with the first totally new items limited to figures, which could be developed and put into production quicker and cheaper than the proposed

Once again, comic book artist Dave Cockrum was called in to lend his expertise and dynamic design sense to the project. Actually, during the last few years of Aurora kit production, Dave was delineating virtually all the new fantasy and science fiction items at the company. Dinosaurs, movie monsters, and alien robots all benefited from the Cockrum touch.

The first characters to be transferred from pencil and paper to hand-carved acetate patterns were Gort, the gleaming metal robot from *The Day The Earth Stood Still*, and the Metaluna Mutant from *This Island Earth*. The model Gort stood on the ramp of his flying saucer, and had his eye beam melt the rifle of a nearby soldier. The Metaluna Mutant had multiple jointed arms and claws, and was to be surrounded by spaceship controls.

The most famous pre-Star Wars robot, Robby, was also to be kitted. I had even gone to a museum in Califor-

*Continued on page 49*

## **Broadsword Miniatures**

**CHARACTERS OF QUALITY -**

**NOT JUST FIGURES**



**CALL OR WRITE**

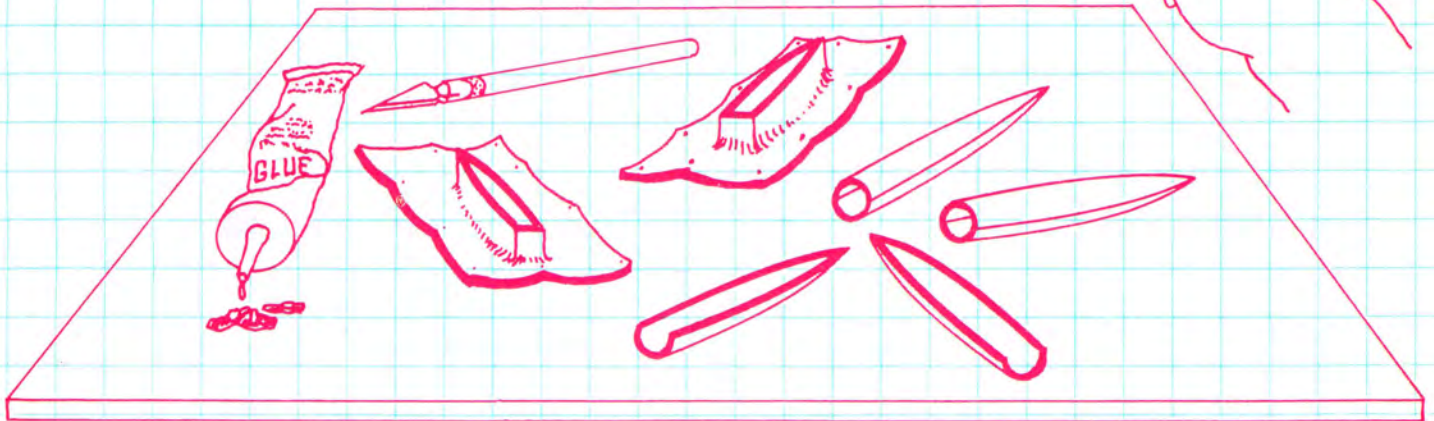
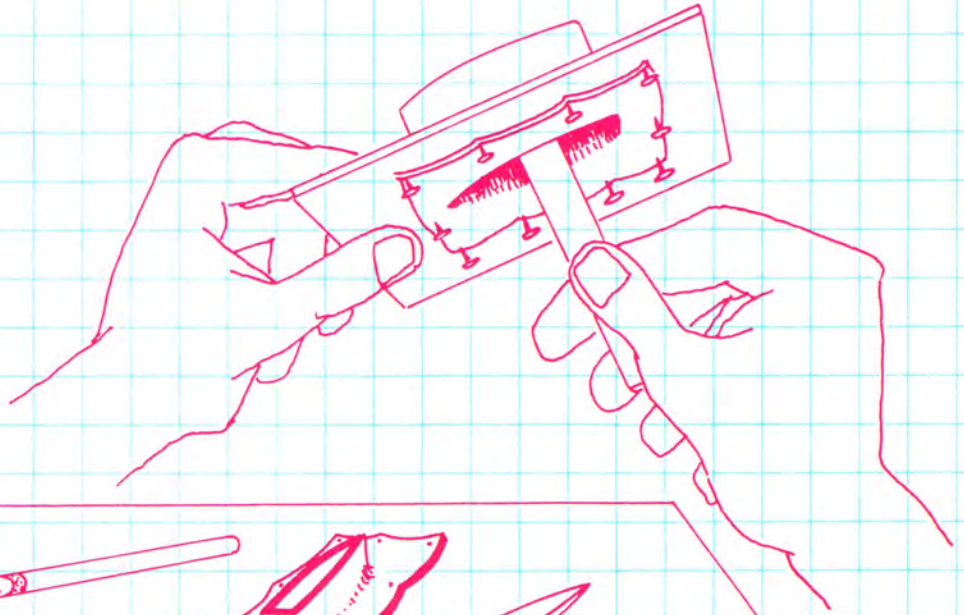
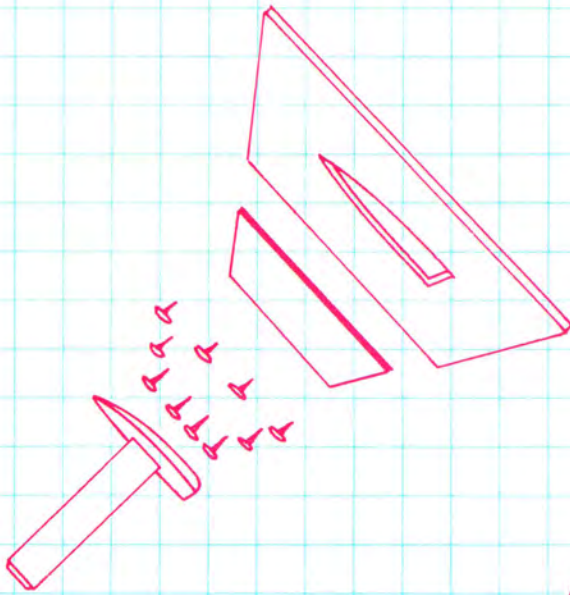
**2442 "C" STONE MOUNTAIN -LITHONIA ROAD**

**LITHONIA, GEORGIA 30058**

**404-482-8891**

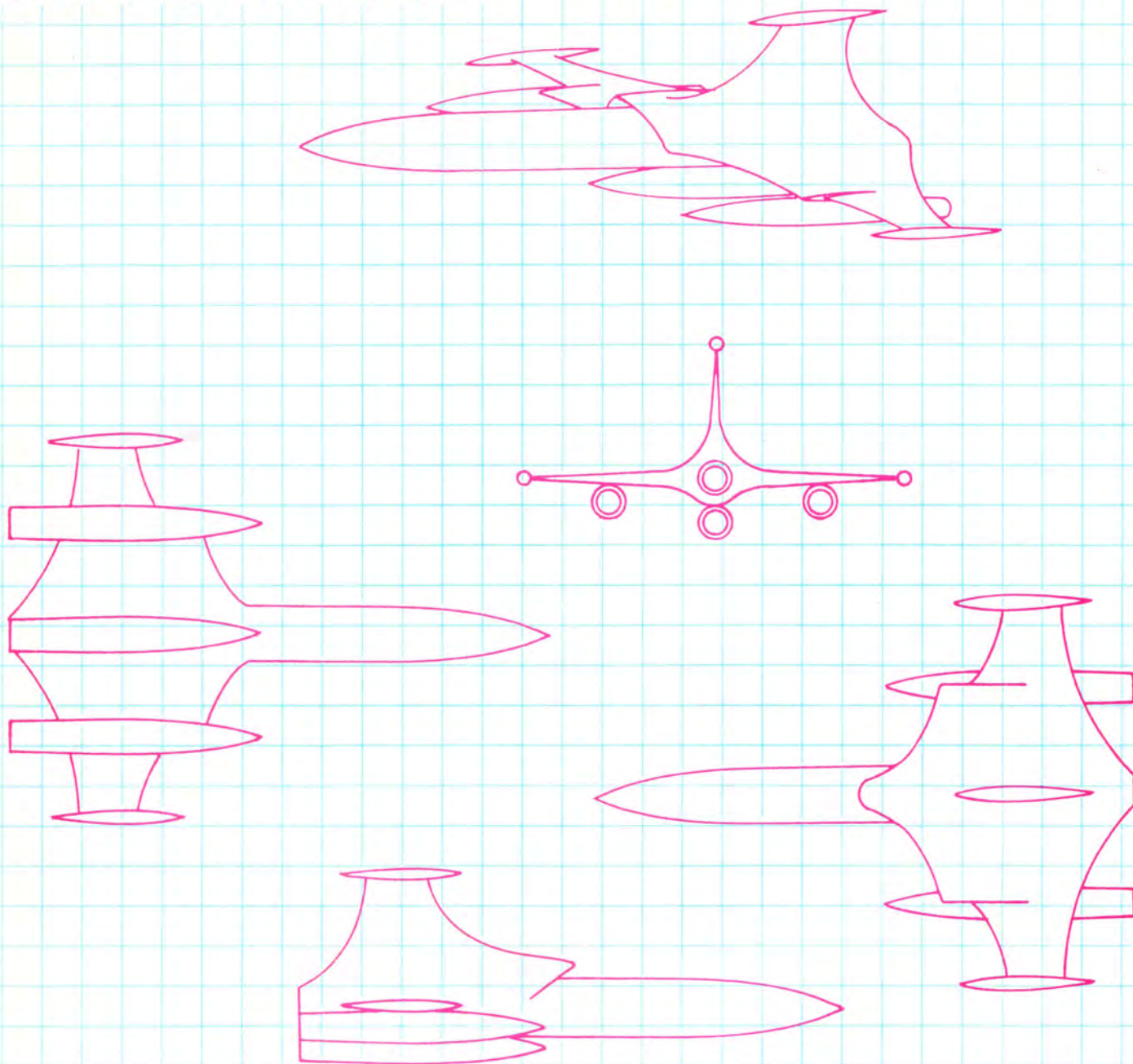


# BUILDING "A SPACESHIP"





# FOR THE KING"



By DAVID DOUGLASS MERRIMAN III

**W**e model builders who construct our miniatures from basic raw materials are a patient and exacting lot, toiling many hours on small, seemingly insignificant details. For these efforts we are usually rewarded with a completed miniature that, to the builder, is a proud testimonial of his skills. The non-professional model maker at least has a choice of what he will build, and the op-

tions are endless; dictated only by what he wants to build. Anything that strikes his fancy is fair game.

Most of my efforts have been directed toward built-models of the classic movie/TV subjects. The JUPITER 2, United Planets Cruiser C57D, R-XM and many others are now behind me. Much of my work is spacecraft. In short, I am a hardware nut.

The vital, though tedious, job of re-

searching and collecting photographs of a particular subject has, until five years ago, been a lengthy and tiresome chore. In the past I have had to rely on old issues of Warren's *Spaceman* and copies of *Famous Monsters Of Film Land* to find enough information from which to build. More recently, a flood of valuable information has been made available through the various STAR-LOG publications. These magazines



**Over:**

The heat forming process is herewith demonstrated. A half-shape of the engine nacelle is formed from wood. On a 1/4 inch board a 1/16 larger pattern is cut out. The plastic is then tacked to it and heated. The nacelle piece is forced through the aperture. Extraneous materials are filed off, and when six pieces have been formed they are glued together creating three engine nacelles.



PHOTOS D.D. MERRIMAN III

mentioned sources, have even published home made plans of their favorite SF craft. Occasionally, a data-hunting modeler will even find the "Holy Grail" of fantasy model makers; the Art Department plans. These gems are the ultimate source from which to construct the model. These are the actual working drawings used to guide the building of the original effects model for a production.

The unearthing and publication of Disney's submarine NAUTILUS from *20,000 Leagues Under The Sea* is a good example of how far one can get into this game. Tom Schermann, the all-time fan of this production, has been searching out material on this project for years. He not only has acquired the Art Department plans, but has also discussed the project at length with members of the production staff as well. We more pedestrian model makers seldom go to such extremes to document the subject we wish to build.

A friend once drew my attention to an illustration of a very sleek looking spaceship by Frank Kelly Freas, which seemed to me the personification of the over-used word Art-Deco, if such description could ever be applied to a spaceship. I was captivated with the concept and made up my mind to model it.

What could have been a difficult research job was made easy when I discovered that the artist lived only thirty

miles from my home. With a phone call I arranged a brief meeting with Mr. Freas in spite of his heavy work load. During my visit he assisted by helping me draw up a set of three-view drawings of the ship which he originally created for the novel, *A Spaceship For The King*.

I was caught up in the man's enthusiasm for his work, a drive I suspected strongly shared by his wife, Polly. The two together are a wealth of SF history and happenings—I learned a lot.

Armed with my drawings I proceeded home intending to construct the model right away.

My plans, however, were cut short as my ship (I'm in the Navy) was soon to get underway for the Mediterranean, a cruise lasting six months. I took along my drawings and tools for the long trip and promised myself that sometime during the cruise I would at least start the model.

Many busy months at sea went by until I found enough extra time to start work. I had to scrounge up the raw materials; a piece of broom handle for the hull, and a scrap piece of balsa wood for the wings. The three engine nacelles, positioned under the hull and wings, would be heat formed from plastic sheet.

The technique of heat forming used to fabricate the three engine nacelle deserves some explanation here. Basically, heat forming is a process where thermoplastic material, after heating, is forced to conform to a specific shape

and books can now provide the modeler with almost all the required photographs (some in color) of our selected subject. The once lengthy task of research has been made relatively easy. If one is reasonably skilled at transposing photographs into three-view working drawings, the STARLOG publications provide all the documentation required to build your model.

Of course, some of us crazies will go as far as spending more than we should to acquire studio production stills. Some even have been known to go as far as to purchase a print of the required movie or TV show. All this to glean a little more information about the subject. Some real fanatics, using the above



while still hot. Once cool, the plastic will retain the new shape.

Not all plastics (there are thousands) are thermoplastics. Some plastics with this characteristic available to the modeler are: Polystyrene, Acrylic, ABS and Acetate to mention a few.

As the heat forming technique is used here, a pattern of the engine nacelle is first cut from wood and then cut in half through its longitudinal axis. This half pattern is mounted on a stick handle as shown in the diagram. To construct a frame, a 5 inch x 5 inch piece of 1/4 inch plywood is required. An opening is then cut in this piece in the shape of the pattern, but 1/16 inch over-size. The frame will act as a stiff backing for the plastic and as a counter pattern that will assist in squeezing the plastic into the contours of the pattern as the pattern is being pushed into the hot plastic sheet.

### Molding the Engine Nacelle

First, tack a 5 inch x 5 inch piece of .010 inch thermo plastic sheet to the surface of the frame as illustrated. Hold the frame, plastic side down, over a heat source such as either a gas or electric range, until the plastic sags. At this point the pattern is grasped by the handle and pushed into the plastic, forcing it through the cut-out in the frame to about 1/4 inch on the other side of the frame. When cool, the pattern is pulled out and you have a plastic casting that captures the original shape of the pattern. Remove the casting from the frame and repeat the procedure until you have six nacelle pieces. These are trimmed and glued together to give you the required three nacelles.

### Shaping The Hull And Wings

The hull is carved by hand to the shape dictated by the drawings. The wings are cut to shape and attached to the hull with super glue. A liberal amount of "green stuff" putty is used to form the fillets between the wings and the hull. You will find that repeated sanding and re-puttying are required before the fillets become eye-ball perfect.

Small slivers of wood are used to form the bullets at the tips of the wings. These too are filleted with putty.

The three completed engine nacelles are then glued in place completing the assembly of the model proper. What remains now is the more demanding task of giving the model a metallic finish.

### Painting The Model

The completed model is first given a coat of gray primer and allowed to dry for several days. A non-color like gray is less likely to show through the finish colors later. It is also important that the pigments of white and black have more body than most color pigments as this

helps fill the grain of the wooden components. This coat is then sanded smooth and painted again. The priming and sanding are repeated until all wood grain and fuzz have been eliminated from the finish.

The final finish color of silver is applied. After drying for a day it is then checked for blemishes and pits in the finish. These problem spots show up readily in a silver color and are easily overlooked when priming. Sand down the affected spots lightly and repaint. Repeat this operation until the finish meets your standards. After the last coat of silver has dried, apply a coat of clear semi-gloss to protect the finish from future handling.

I am glad to report that I was able to complete my model before the ship arrived back in the States. While I was very pleased with the finished model it seemed to cry out for a suitable display base. As I could find nothing on board that would serve, I had to wait until we arrived home to finish the project. Here is what I did, but remember that all sorts of display arrangements are possible.

### Preparation Of A Display Base

Once home, I prepared a small mahogany base. Four wires were bent in sweeping curves and soldered together in such a way that three of them ended

in the exhaust tubes of the three engine nacelles. The fourth wire projected into a drilled hole in the nozzle of the hull. It is this fourth wire that supports the weight of the model so it should be selected with this in mind. The completed wire assembly is then inserted into the base and epoxied in place. The wires are given a coat of epoxy glue and tissue paper is wrapped around each wire to represent the billowing exhaust trails. The complete wire assembly is then painted white followed by some smudging with carbon dust applied with a small brush. A brief airbrushing of red is applied to the nozzle ends of the wire assembly to represent fire belching from the four engines.

The completed model sitting on its stand is a striking and realistic representation of Mr. Freas' conception. This was confirmed by the artist himself when I presented the model to him as a gift.

My reward was the pleasure of creating something I consider beautiful. The work filled the otherwise wasted hours aboard ship and turned them into a time of relaxation and sharpening of skills. Model making, for me, is time away from the cares and demands of the real world for a short trip into a world of fantasy. To me, that is all model making, or any other such hobby, should be. ■

## It takes more than metal to make a great model figure



It takes a lot of imagination, fine sculpting, craftsmanship and experience to create a quality product that you will want in your diorama or adventures.

It takes just a few minutes to visit your hobby store for the only official *Advanced Dungeons & Dragons*® fantasy miniatures available.

**Grenadier Models, Inc.**  
Box 305, Springfield, PA 19064



for Atari Computer will not work on an Apple System. All records work on all turntables, not so with computer games.

At present there are *Three* basic formats for computer games:

1) **Cartridges:** At present only ATARI produces these specifically for their computers. This type of game is the easiest to use. You just drop the cartridge right into the computer and you can start playing immediately. The computer learns the game instantaneously. The program is built into a microprocessor chip. The major disadvantage of cartridge systems is that you cannot design your own cartridge computer game.

2) **Discs:** Also called "floppy discs."

The disc is a 5 inch by 5 inch plastic card that looks like it has a small phonograph record locked inside. The disc is fed into the computer through a disc drive. The computer takes approximately 30 seconds to "read" the program before you can begin to play. All of the major computers have disc drives available for their systems. (Unlike cartridges, you can buy blank discs and "create" your own games.)

3. **Cassettes:** The same cassettes that are used to record music are also used to store programs for home computers. The cassette system is considerably less expensive than disc drive but it is also the slowest in feeding programs into the computer. For instance, Atari's SPACE INVADERS takes about two

minutes to load. (Cassette systems also allow you to create your own games or store any other kinds of information.)

(Note: Most games on the market now are available in both cassette and disc drive formats.)

Here's a sampling of some of the games that I have played over the last month or so:

**Arcade-Type**—These computer games resemble those fierce quarter-eating machines that seem to be everywhere. They are basically a test of your reflexes. These are also the easiest games to play since they do not have too many rules and there is not much real strategy involved.

In STAR RAIDERS, from Atari, there is a choice of levels of difficulty so that





# COMPUTER GAMING

## PART ONE: Software

By MIKE KILBERT

Well it's finally happened, computers have taken over the last refuge of mankind—adventure gaming. Just when you thought you could just go over to a friend's house to get away from the lousy computer that fouled your school program, you find that he has one of those infernal machines in his house. You're sick of trying to correct errors made in your charge account by some wild computer in the Midwest that keeps charging you for galoshes and your friend calls you up and says "How about a session of Computer Wingo Pingo?" What's this world coming to??

It seemed to me a vicious trap. I had trouble with high school math and someone is telling me that these small computers would revolutionize gaming and that if I didn't get involved soon, I would get left behind. "It's as easy as putting a quarter into one of those arcade machines," they said. Just turn it on, press a few buttons and even a nincompoop like me can be whizzing along in no time. Seeing is believing.

The first step was to contract some of these companies to see if I could borrow some of their products. Soon my mailbox was bulging with goodies from all over the country. Next step was a little harder. What do you do with a lot of tapes, disks, and cartridges when you don't have a computer?

Easy. I just went over to Computerland/Nassau (79 Carle Place, L.I., N.Y. 11514) and explained my plight. A writer without a computer, a bunch of games, and a fear of higher mathematics. Elliot and Sydel Greene not only allowed me to use their computers but they also assigned members of their very helpful staff to show me the basics of computer use. In fact, once I got started I was no longer intimidated by the machines and actually became an instant convert. I could easily see why their shop was so busy; they gave everyone the same kind of treatment. Pretty soon (when the boss gives me a raise) I'm going to buy one of those machines for myself.

While I was playing the games, I also spent some time getting a quick course in personal computers. First problem is the terminology or specific terms that they use in the world of computers. These words sound like another language but they are understandable.

In talking about computers there are two basic categories that all computer-related material falls. *Hardware*—which is the machinery that is hooked up to the computer and the computer itself. It may include a cassette recorder, a disc drive, a modem (something that allows you to hook up your computer to another computer using your home telephone), a printer (similar to a typewriter but it prints whatever your computer is instructed to type out), etc. (I will get into the whole subject of hardware in the next issue.)

The other category is *Software*. This is, basically, the information that you feed the computer to allow it to perform certain tasks, which is called a program. A typical program: *I am going to list some numbers. Add all of the odd numbers and divide them by the largest even number. Print a list of the odd numbers and print the result of the problem.*

It is not as easy to program it as it is to say it, but it can be done with a little practice and some work with the manual.

Maybe you're not interested in using a computer in this way. You're a gamer. Then you just have to buy a program from one of the manufacturers that now produce them. Instead of buying a game in a box, you just buy a program that teaches your computer how to play "Space Mutants Invade Brooklyn." This, in effect, is what I did. Manufacturers like Avalon Hill, Atari Program Exchange, Atari, Automated Simulations, and Strategic Simulations sent me copies of their games. These "games" are actually cassettes, discs, or cartridges that program your computer to play the game. No prior knowledge of computers is needed. You just plug your computer in, load the program according to the clear and explicit

directions, and you're on your way. You either slip a cassette into the player, slide the disc into a disc drive, or drop in a cartridge and tell the computer to read it. Once the computer is finished reading the program, it will tell you that it's ready to play. Follow the rulebooks and you're set to go.

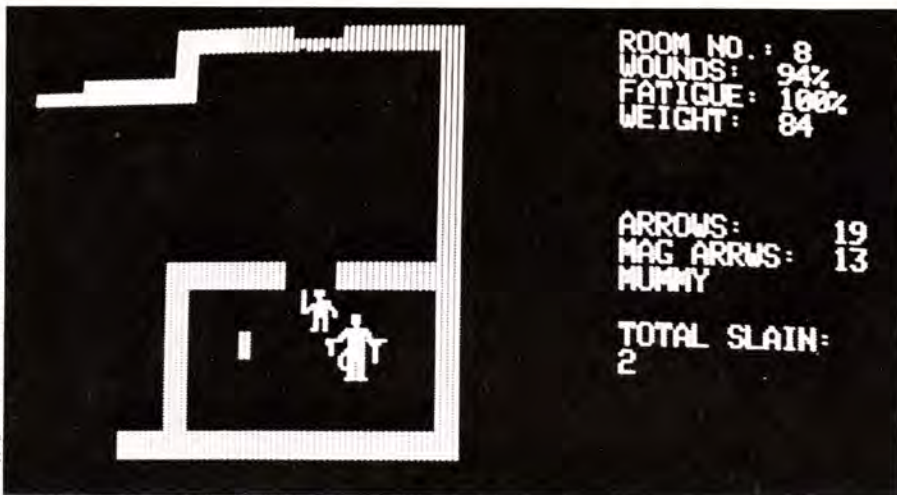
To play any computerized game you must have FOUR basic items: 1) The computer. 2) A game-program to "teach" your computer how to play its part of the game—it could be your opponent, a scorekeeper, a gamesmaster, a referee, or just a "thing" to allow you to play the game. 3. A piece of hardware to allow the machine to "read" the game-program. 4. A TV to "display" the game so that you can visualize what is happening. (Remember the next issue of FANTASY MODELING will be concerned with the machinery or hardware).

It is not really as mystical as it sounds. When you go into an arcade, you are playing a computerized game. Inside that large box is a mini-computer, a cartridge that "knows" the game, a hook-up to the computer so that it can "read" the cartridge, and the TV screen that you see. As easy as dropping in a quarter and hitting the START button; you're on your way. For home computers it is just as easy.

Depending on which game you would like to play and the system that you own, you are faced with three different formats for game-programs. The important deciding question is: Is this game compatible with my computer system?

A good analogy might be home stereo systems. Everybody buys an amplifier but the format of the recorded material depends upon your other equipment. You can buy records, cassettes, reel-to-reel tapes or 8 track tapes. To use any of these formats, you must have the correct player to accept the style. A turntable for records, an 8 track player for cartridges, etc. There is a breakdown in this because each computer system ACCEPTS ONLY its own compatible games. A game designed





you can work your way up as you increase your skill. This also means that there will always be a challenge, no matter how proficient you may become. This game is won when you have cleared all enemy ships from the space sectors near your home bases.

By looking at the Galactic Chart display you can see where the enemy ships are in relationship to your home bases. You then switch to a view from your spaceship. As you fly through space, meteors and enemy ships zoom past you. It is complete with full color (if you are hooked up to a color TV set) and full sound—other ships zooming by, explosions, missiles firing, etc.

The options while you're playing: use the attack computer for locking in on targets, fly at hyperspace speed, use deflector shields, chart your fuel supply and refuel when necessary, fore or aft views, changing speeds, etc.

This would be a perfect game for an arcade set-up except it can take over ten minutes to complete the game. Too long, it wouldn't make enough money for a busy arcade.

If you do well the computer awards you a higher rank; if you fail the computer you are given the posthumous rank of Garbage Scow Captain.

(This is a cartridge game-program and the game is compatible only with Atari 400/800 computers.)

SPACE INVADERS, also from Atari, is the home version of the classic arcade game that started it all. It is available in

cassette form and can be used only in Atari computer systems. It also comes complete with full-color display and the same sound effects that drive you crazy at the amusement parks.

*The Computer As An Opponent*—Avalon Hill's TANKTICS, which was designed by Chris Crawford, represents what I consider to be a significant breakthrough in computer games. Besides the game-program; available on cassette on disc; there is a traditional-type game board and cardboard counters much like those in other board games.

The computer picks a hex on the map, you ask the computer "Do I see and also give you one of the hexes as a starting point. As you move across the map, you ask the computer "Do I see anything?" If you do encounter enemy tanks, you must either avoid them or destroy them. The enemy tanks are under the control of the computer and they represent your opponents. The computer knows where its tanks are and it can attack you at any point. (The play of the game is reminiscent of computer chess games, where the human needs the board to visualize what is happening in the game.)

The human uses the counters and the map to keep track of the game play, location of friendly and enemy units, and the objective location.

(TANKTICS is available in both cassette and disc versions for Atari, Apple, TRS-80, and PET systems.)

I consider this game a breakthrough because it represents a significant and important middle ground between board games and computer capability. I'm sure that in the future many more board game companies will enter into the market with these hybrid games.

Games like TANKTICS save a lot of time and money in development and production costs. To design a map for computer game use is a rather involved process. You must actually program the computer to draw the map. It takes quite sophisticated programming to design a good computer map. The saving alone on map development can be quite a lot.

The other "nice" thing about this type of game, in terms of design, is that it does not put the game beyond the capabilities of the average home computer system. The most important limitation on any computer system is the size of its memory. Anything that you ask the computer to do must be stored in its memory bank. Most basic computer systems are rated at 16K, which is a measure of how many characters or symbols can be read into the computer memory. Some games are rated at 16K, 24K, 32K, 40K, etc. The more complicated a game is, the more memory it will require. Asking a computer to display in color also requires more memory since you must specify which color is to be placed in what area.

The map for some games could use between 14K to 16K of memory. Once the rest of the program is loaded it brings the game to the 24K level and beyond. Such involved programs force the person to buy added memory in order to play these games. (Adding memory is a process that varies from one computer system to another. For some systems it is as easy as plugging in a small panel, for others it requires a skilled technician to actually dismantle the computer. Ask before you buy. Find out how much memory the games you like require, and then find out how much it would be to upgrade your system. It may even force you to change the system you're buying. For instance, to upgrade an Atari 400 from 16K to 32K could cost somewhere around \$300, while the Atari 800 can be upgraded for only \$150.)

*The Computer as a Gamemaster*—There is considerable interest in adventure/exploring games, because of the increased popularity of role-playing games. Instead of a gamemaster who must lay out the adventure and feed information back to the players; you can explore the adventures that are generated by the computer. This makes adventure-gaming a lot more enjoyable. For a full-fledged role-playing game you must find someone who is willing to create the adventure and then other players to keep the action going. Fre-

## SYSTEMS ANALYSIS

Atari Inc.  
1265 Borregas Ave.  
Sunnyvale, California 94086

Games are only compatible  
with Atari Computer Systems  
Cartridge, Cassette, & Disc Format.

Automated Simulations Inc.  
PO Box 4232  
Mountain View, California 94040

Games for Apple, Atari, PET  
and TRS-80 systems.  
Disc and Cassette format only.

Microcomputers Games Inc.  
Avalon Hill Game Co.  
4517 Harford Road  
Baltimore, Maryland 21214

Games for Apple, Atari, PET,  
and TRS-80 systems.  
Disc and Cassette format only.



# STRATEGY & FANTASY WORLD

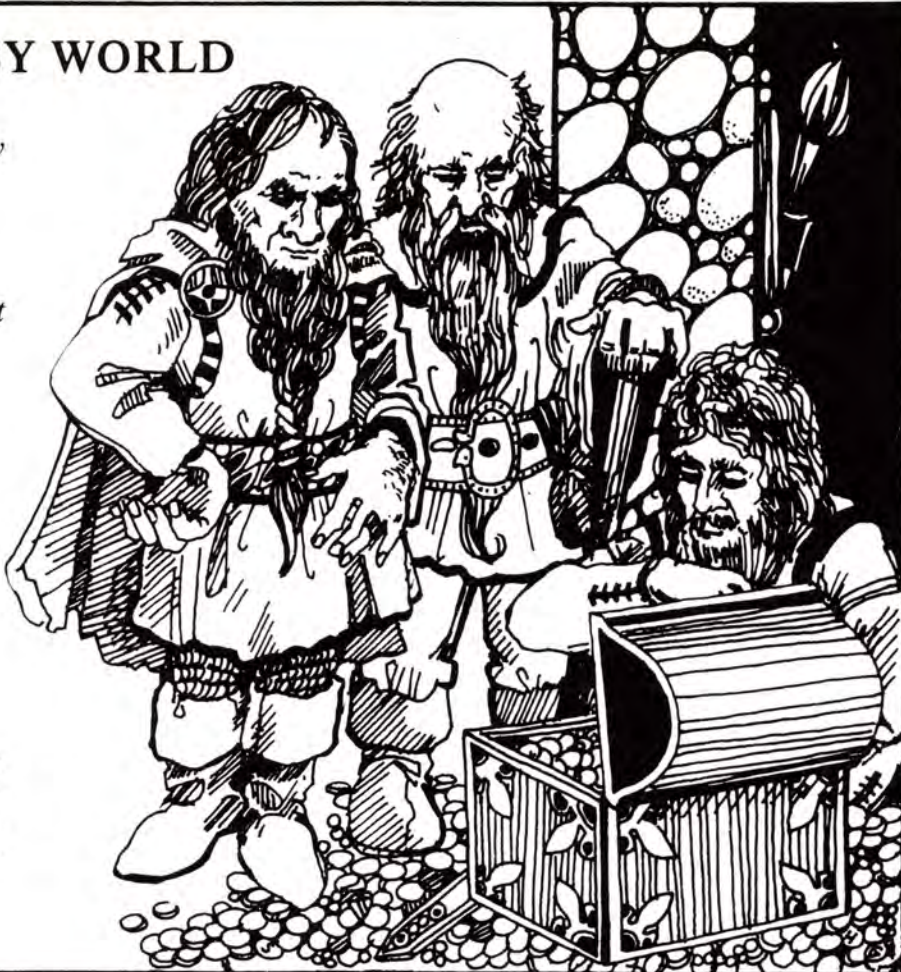
*offers you a book that explains  
Fantasy games more clearly than any  
basic set:*

Fantasy Role Playing Games  
by J. Eric Holmes, M.D.

*New and Now available for \$14.95 at  
our stores in the following cities:*

- BALTIMORE, M.D. - 8 West 25th St. at Charles (301-366-1665)
- BOSTON, MA - 201 Massachusetts Ave. (617-267-2451)
- CLEVELAND, OH - 2752 Van Aken Blvd. (216-751-7869)
- FALLS CHURCH, VA - 103 E. Broad St. (703-532-2477)
- KING OF PRUSSIA, PA - Valley Forge Shopping Center, 254 W. Dekalb Pike (215-265-8562)
- PHILADELPHIA, PA - 2011 Walnut St. (215)563-2960)

*If you can't stop in to see our games, books and miniatures, call or write us at our mail order headquarters: S F World, 151 East 10th Ave., Conshohocken, PA 19428 (215-825-4660). Ask for a catalog of games, books, etc.!*



quently there are players with no Master available, or there are players who do not like the master, or the Master's adventure is too hard, too easy, not interesting. The computer eliminates these problems.

One of the companies that is in the forefront of this type of computer gaming is Automated Simulations Inc. They have introduced a fine series of these games under the DUNJONQUEST banner.

The introductory game in the series—"The Datestones of Ryn"—contains an adventure of about 20 to 30 rooms ready for exploration. As you move from one room to another, your view of the Dunjon is constantly changing. The screen shows only 3 or 4 rooms at a time. You never have a picture of the whole Dunjon at one time. In effect, you view on the screen pretty much what you would see if you were really walking around. A hallway, some doorways, a peek into two or three rooms. As you move from one area to another, the area behind you is no longer visible. For example, as you move to the left more and more of the area on the left will come into view, but at the same time areas to the right will no longer be in view. It's up to you to remember where you've been and what you've seen.

As you enter a hallway or a room you will encounter randomly generated

monsters, evil characters, treasures, etc. (Since the computer randomly generates these objects, you will never end up playing the same game twice.)

While you are exploring the Dunjon, you have a choice of moving forward, turning, examining walls for secret doors, searching for traps, grabbing treasure, speaking with monsters, drinking healing potions, or attacking in 5 different ways.

When you've become experience in this type of gaming, you can move on to their award-winning and more sophisticated "Temple of Apshai." With four levels and over 200 rooms, it could take you weeks (!) to explore every room. Of course, once you've had enough for one session, you can tell the computer to save the character so that you may return to your adventure at some other time.

In Temple of Apshai and its companion game—"Hellfire Warrior"—there are quite a bit of possibilities beyond the introductory game. Both Hellfire Warrior and Temple of Apshai have some options that make them not only more complex but also more enjoyable than the introductory game.

Before you can start your adventure in these two games you must pick up supplies, weapons, and other things that you might need. To outfit yourself for a DUNJONQUEST, you must strike a deal with the tight-fisted innkeeper.

He'll offer you various items and he'll give you a price for each one. Since you only have a few pieces of gold to start off the game, you must try to bargain with him. If your offer is too low, he'll be insulted and he won't negotiate any further; if your offer is a reasonable one, he will lower his price. But once he decides on a price, you won't get him to budge. He is notorious for striking a hard bargain. In Hellfire Warrior, you not only have to negotiate with the Innkeeper, you must also go to The Armory, The Apothecary, and The Magic Shoppe before you can continue further.

In playing all three of these games I was fascinated by the endless possibilities that each DUNJONQUEST offered. The excellent color display helps the player to visualize what is happening in the game. You also find yourself faced with various monsters, creatures, and human-types that pop-up when you least expect it.

The major advantage of the DUNJONQUEST games is that they're fun and you don't have to search for opponents. The computer takes you along on this solo adventure.

(All three games are available in cassette and disc for Apple, TRS-80, and PET computer systems.)

That's it for now. Watch for the next issue where I will review some other games and give you the lowdown on the hardware end of computer gaming.



# ADVENTURES IN GAMING

By MIKE KILBERT

**S**teve Jackson Game Company has only been around for about a year, but the fresh and innovative approach of this new company has already made its mark. Their new releases represent much of new and different thinking.

**KILLER:** For those of you who are not aware there is a new fad sweeping the colleges and universities of the U.S. It's a game played real-life style where students are given "contracts" to "kill" other students. Let me clarify this right away—"killing" might mean merely sneaking up behind somebody and shooting him with a watergun. Or inventing a trap where a water balloon might drop on someone's head, simulating a bomb. Students have been running around campuses doing this for quite a while. **KILLER** just takes all these informal games and turns it into a coherent rule book. It explains what is fair to use (Nothing that might hurt anyone), how to create "weapons," how to write a contract, how to set-up the game, the history of the game, etc. If you're interested in real-life adventure-gaming, maybe you should try this.

**CAR WARS:** In the future the police will no longer be able to control the roads of the U.S. and that's when the **CAR WARS** will begin. This game allows you to build-up a car of the future expressly for the purpose of knocking out other cars in the free-for-all of the roads of the future. It's anything goes in a fun game. Haven't you ever wished that you could blow-up that car that just cut you off? Here's your chance.

**UNDEAD:** Dracula is loose and he's running around London. Can you stop him before he claims more victims. Can you stop him before he gets you????

Steve Jackson Games  
Box 18957  
Austin, Texas 78760

\* \* \*

Greg Stafford, Tadashi Ehara, and their friends at Chaosium seem quite busy with their latest releases. These releases were first seen during the Adventure-Gaming Convention Season.

**STORMBRINGER:** A new Role-Playing game that is based on Michael Moorcock's World of **ELRIC**. The World of **ELRIC** is the setting of a series of Moorcock's fantasy novels.

**STORMBRINGER** is the first new role-playing game to come from Chaosium since the release of **RUNEQUEST**. It seems that the enthusiastic response that **RUNEQUEST** has gotten

has encouraged them to produce a second game.

The game is quite complete. It includes the rulesbook, a map based on the Moorcock descriptions, sheets that help the players follow the adventures of their characters, and a complete set of dice.

Not to be forgotten is **GRIFFIN MOUNTAIN**. To quote the designers "Gamers have enjoyed playing **RUNEQUEST** for a long time now. The time is right for a major campaign sourcebook." In other words, those people who already have copies of **RUNEQUEST** and that are looking for a complete world for future adventures will certainly find that **GRIFFIN MOUNTAIN** is just what they're looking for.

Chaosium  
PO Box 6302  
Albany, California 94706

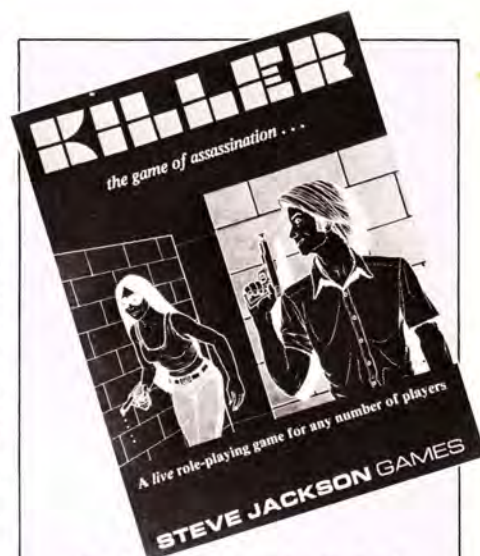
\* \* \*

It's amazing how many quality supplements Judges Guild issues in the course of a year. Those of you who are interested in role-playing games should check their rather extensive catalog for some of their very useful items.

For Game Designers' Workshop sci-fi role-playing game **TRAVELLER** they have released three new items. **DOOM OF THE SINGING STAR**—this is a complete adventure aboard a Cruise Line spaceship. It includes complete plans of the ship and a guidebook of the characters that you will encounter: crew, passengers, etc. **FIFTY STARBASES**—This book will help gamesmasters to run **TRAVELLER** campaigns because it is complete with maps of Starbases that can be used as part of their adventure. While **NAVIGATOR'S STARCHARTS** are blank maps that players or gamemasters can fill in as they create or visit certain Space Sectors.

Their other three new releases are pre-created adventures for other role-playing systems. The scope of these supplements give you some idea of the range of their products. **THREE KILOMETER ISLAND** which is a spoof of the Three Mile Island disaster designed for Fantasy Games Unlimited's **VILLAINS & VIGILANTES**. **DRAGON'S HALL** which can be used as a solitaire adventure for **ADVANCED DUNGEONS & DRAGONS** from TSR Hobbies. And **NIGHTMARE MAZE OF JIGRESH** a complete adventure for Game-Science's role-playing game **EMPIRE OF THE PETAL THRONE**.

Judges Guild  
1221 N. Sunnyside Rd.  
Decatur, Illinois 62522

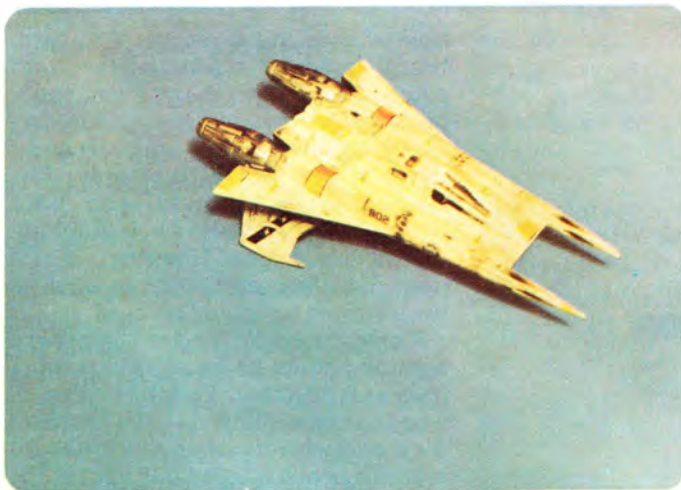
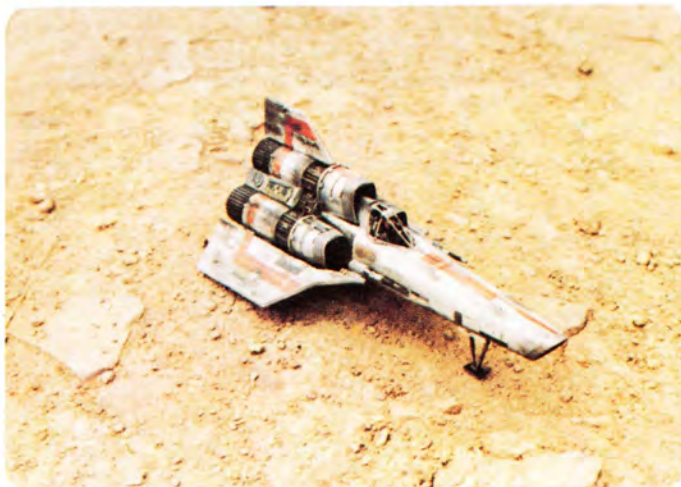
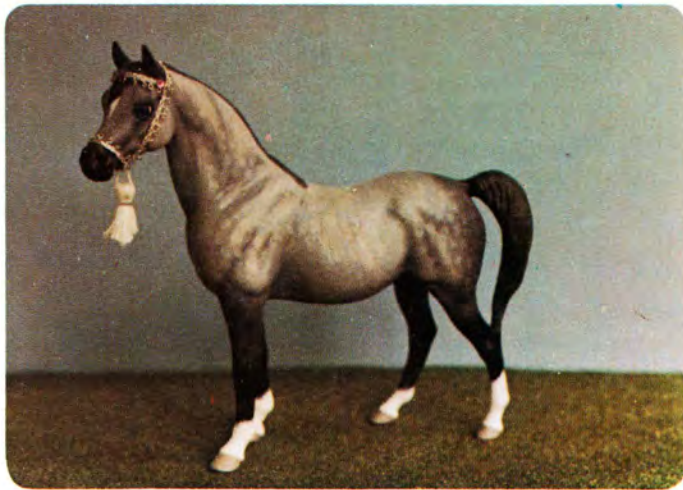


## DOWN WITH KILLER

**K**ILLER is the game of assassination long known on college campuses as Dart Wars of **KAOS** (Killing As Organized Sport). In view of what has been going down this year alone, President Reagan and John Lennon come to mind. I take a very dim view of the entire **Killer**—**KAOS**—Dart Wars syndrome. It's a little too close to home, with nothing more than the difference between a dart gun and a .38 separating fantasy from reality. There are, of course, a great number of pamphlets offering serious instruction on assassination, terrorism, guerilla warfare and all sorts of subversive techniques readily available to those who have an interest in such matters, though one must make an effort to find them. Here, we are dealing with a game that is certain to wind up in the hands of youngsters who lack judgement in such matters. For this reason, I give this one a resounding thumbs down, notwithstanding the air of legitimacy imparted to this game by an Assistant Professor of Folklore at Indiana University. I find it very easy to forego the study of this kind of folklore.

—By Richard Riehn





## READERS' PHOTO PAGE

### SHAWN SPRADLING Cleveland, Ohio

I've been building models for as long as I can remember, mostly aircraft. I began building spaceships shortly before Star Wars came out and have continuing doing so. Creating space hardware is a real challenge, and I think more creative. The photo's I've sent are just a small sampling of what I've done.

There aren't many contests held locally—but there was one about a year ago in which I took Best in Show and 1st Place for my model's category. I would love to see a contest involving Special Effects model makers. That would be a lot

I rely on my Badger airbrush and automotive supplies such as paints, sandpaper, spot putty, masking tape, and a good little air compressor for my creations. I have my own studio (in reality an old, converted camper/trailer). I am a perfectionist when it comes to my models.

### JANICE MEIXNER Ft. Lauderdale, Florida

I decided to write and tell you about another popular, yet little known, hobby—the world of collecting, repainting/remaking and showing model horses, which has been active and thriving for over 10 years now! The largest and most well known competition is Model Horse Congress (August 1982 is the 10th anniversary show!). The models range in size from under 1 inch to 14 inches. Most are plastic or china, with some original sculptures.

I, myself, own and regularly show approximately 150 model horses, a few of which are currently worth over \$100. I know these are not completely in the realm of fantasy or science fiction models, but they do take the same type of imagination, creativity and talent.

I am "crossing over" into the fantasy diorama hobby, hopefully in the near future.





# PHOTOGRAPHING YOUR FANTASY SPACECRAFT MODELS

By JACK GURNER

**H**ave you tried photographing your space fantasy models by suspending them from black threads against a black background? Doesn't seem to work very well, does it? Over the years I always heard that that was how Hollywood did it. So how does a modeler with only basic equipment make realistic photos of his prized creations?

I started out the hard way trying to photograph my spacecraft models. I tried the thread, and although it was as dark as the background, the light made it stand out distinctly. Meanwhile, I was trying to get a realistic star field. I tried punching holes in my background and putting a bright light behind it. What I got was blobs of light. I was getting disappointed and discouraged. *How does Hollywood do it?*

I got my answer while reading about filming the shuttlecraft in the motion picture *Outland*. The special effects wizards simply suspended the craft from a boom. The model hid the boom from the camera's sight. How simple! Sometimes we overlook the simple—and inexpensive—solutions.

An old photo light stand and a section of curtain rod became my model boom. I attached the rod to the top section of the stand with an adjustable clamp. The boom needed to be as adjustable as possible to make the work easier. Any common household stand could be

substituted for the photo stand: floor to ceiling plant stands, music stands, lamp stands, etc. The clamp should be of a type that allows the boom to be moved freely and then locked tightly into position.

My "space" is a nine foot square piece of black photo background paper. Here again many substitutes could be used. A piece of black cloth could be hung

from the ceiling or sections of cardboard could be taped together and painted black. Even the wall itself could be painted black, although I don't recommend redecorating without checking with the rest of the family. The larger the background—and your workspace—the easier photographing the models will be. However, even a piece of black poster board as small as two by three feet could be used.

I have always felt that realistic space lighting should be harsh and coming from one direction. To achieve this effect, I use one light placed to the side of the model with only a simple cardboard reflector to add a little "fill" light to the other side. The light is a simple clamp-on type commonly found in hardware stores.

I encircled the light with a "snoot" made from black poster board formed into a tube. This "snoot" keeps stray light from falling on the background or camera lens. Care should be exercised not to let this contraption get too hot and create a fire hazard.

The reflector is white poster board glued to a piece of corrugated cardboard of the same dimensions. It is placed on the side of the model opposite the main light source so enough light is reflected to keep the unlit side of the model from going completely black.

Up to this point I haven't mentioned the actual photography. Rather than



**Modeler Harold McPherson with his Ticonderoga and spare parts. Above: The 01'97 on route to stardom in the amateur film, *Star Overcharge*.**



To set up a basic photo session you should first place your version of the model boom stand in front of the black background. You should be working at night or in a room that you can darken. Now attach your model to the boom. That sounds simple enough, doesn't it? Unfortunately, it's not. I am still looking for a simple, reliable method to secure models to the boom and at the same time do as little damage to the model as possible.

[illegible]

Now stand back and take a look at the model from about where your camera will be positioned. You shouldn't see any portion of the wire support. If you can, redo it until it is completely hidden. Place your tripod mounted camera into this position and look at your model through the viewfinder. Move the camera or adjust the boom until you can no longer see the boom behind the model. What you should be seeing is a seemingly unsupported spaceship surrounded by the blackness of your "space" background. You are probably also seeing an out-of-focus portion of the stand which supports the model boom. How do you make it disappear? You blend it into the background by draping black cloth over it. I use long narrow strips which I attach to the stand with clothes pins. Now take another look through the viewfinder. You should be seeing nothing but the model floating in a sea of black. Yeah, I know you're not seeing any stars either. We'll get to that later.

A black and white photograph of a large, complex mechanical device, likely a piece of early 20th-century machinery or a model of a machine. The device has a long, rectangular body with various components, including a large cylindrical section on the right and a complex assembly of pipes and valves on the left. It is supported by a base with vertical slats.

FANTASY MODELING/VOL. V 29



Place your reflector on the opposite side and observe the reflected light on the model. It will take a little practice to learn to place the reflector to best advantage. Just make sure that it is out of camera range and is not turned so that it reflects a lot of light toward the background.

If all is going well the view through the camera should still show the model floating in a sea of black. The background should appear perfectly black since you are trying to get the darkest possible "space" on film. Film! That's right, the moment of truth has arrived, it is now time to load your camera.

I recommend that you start out using black and white film. A good choice would be a medium speed (ASA 125) emulsion. If you can do your own darkroom work that's a definite plus. If not, try to find someone who will process your film and make a contact sheet. If you don't know what to look for, hopefully they can show you which exposures are best.

Now that you are loaded and ready to shoot, you are going to need an exposure reading. You can't take an accurate direct reading because the background will fool the meter. What you must do is place something of a neutral gray color in front of the lens so that it receives the same light as the model and take your reading from that.



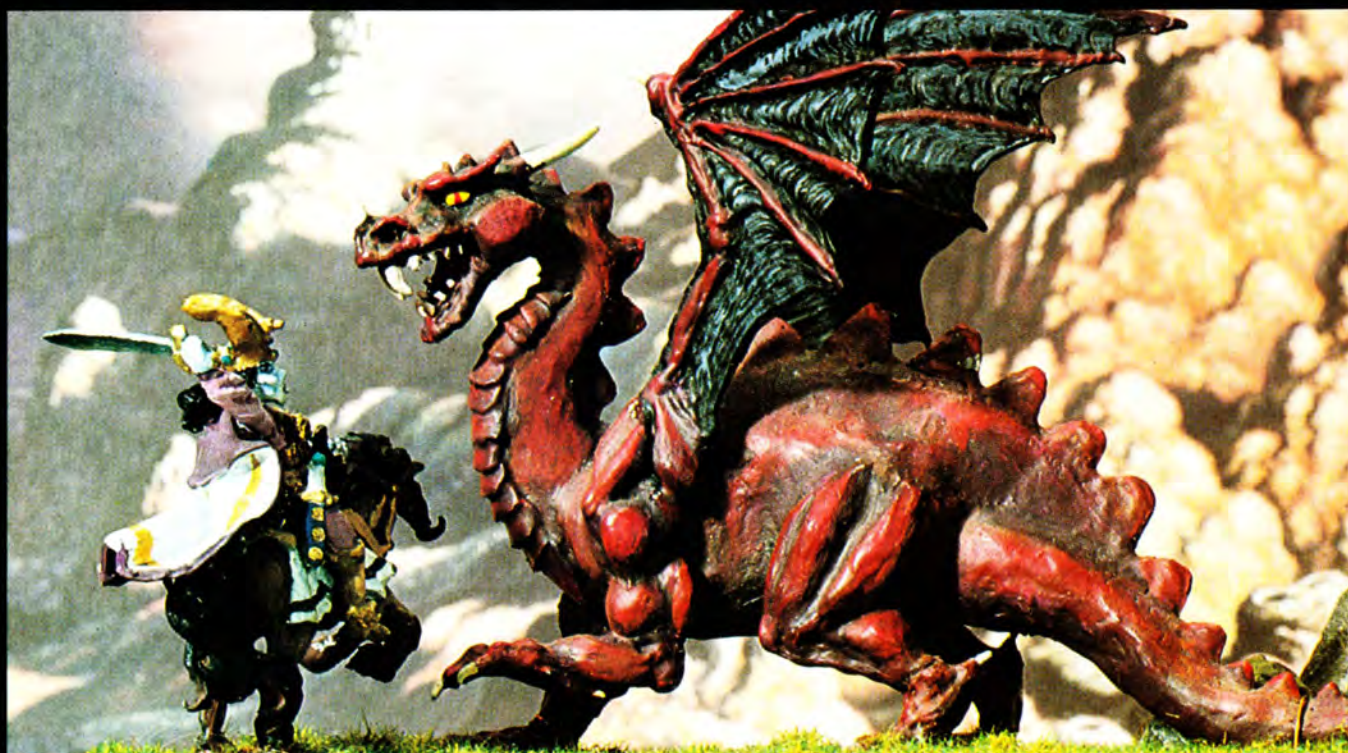
A piece of 11 by 14 inch cardboard sprayed medium gray would serve this purpose. Place this card in front of the camera close to the model so that it fills the viewfinder frame. Turn it just enough so that the main light falls on it. Set the aperture on  $f/16$  (for depth of field) and read the recommended shutter speed. Take one photo, move the shutter speed to one number lower and shoot another, then move the speed to one number higher than the first shot and take a third frame. This process is known as "bracketing" and should yield at least one good exposure.

Since you are using an aperture of  $f/16$  (recommended for depth-of-field, but not an iron clad rule), some of your exposure times will be as long as four seconds or more. This is where a cable release with a lock-down feature comes

in handy. Your camera has a B (bulb) setting on the shutter, a hold over from a time when the shutter had to be held open to use a flash. With a locking cable release you can open the shutter, lock down the cable release and the shutter will remain open. The lens cover can then be used as a shutter by removing it, timing the proper number of seconds and then placing it back over the lens.

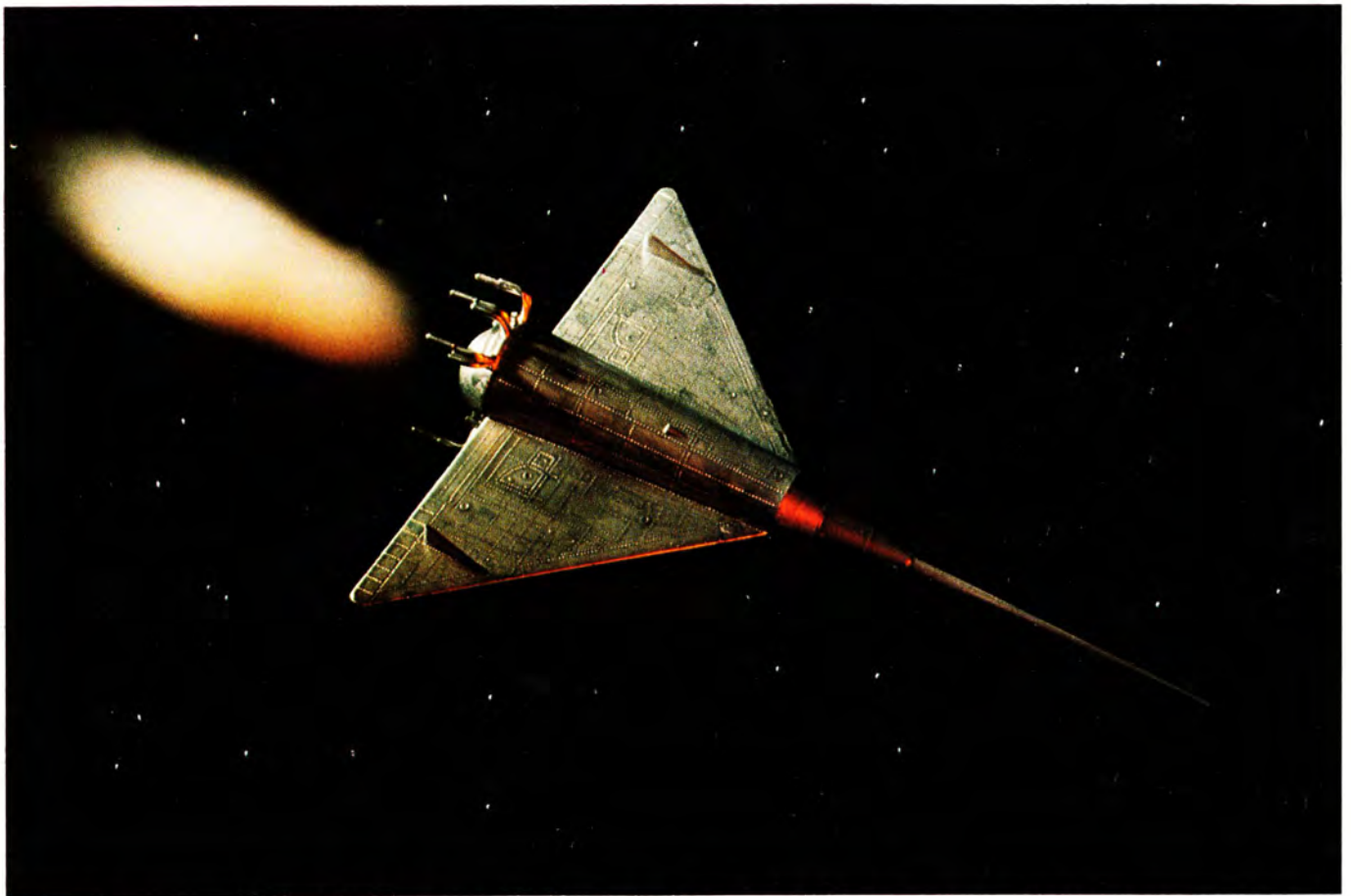
During the session you will probably want to photograph the model from several different angles. You can do this without moving the camera by bending the wire support. If done carefully you can bring the model into different positions without exposing the wire support or boom. Just remember to look through the viewfinder for anything out of place.

## DRAGONS BY DRAGONTOOTH



**WRITE FOR A FREE LISTING TO: TOM LOBACK GENERAL ARTWORK  
152 WEST 26th ST, #36 NYC, NY 10001**

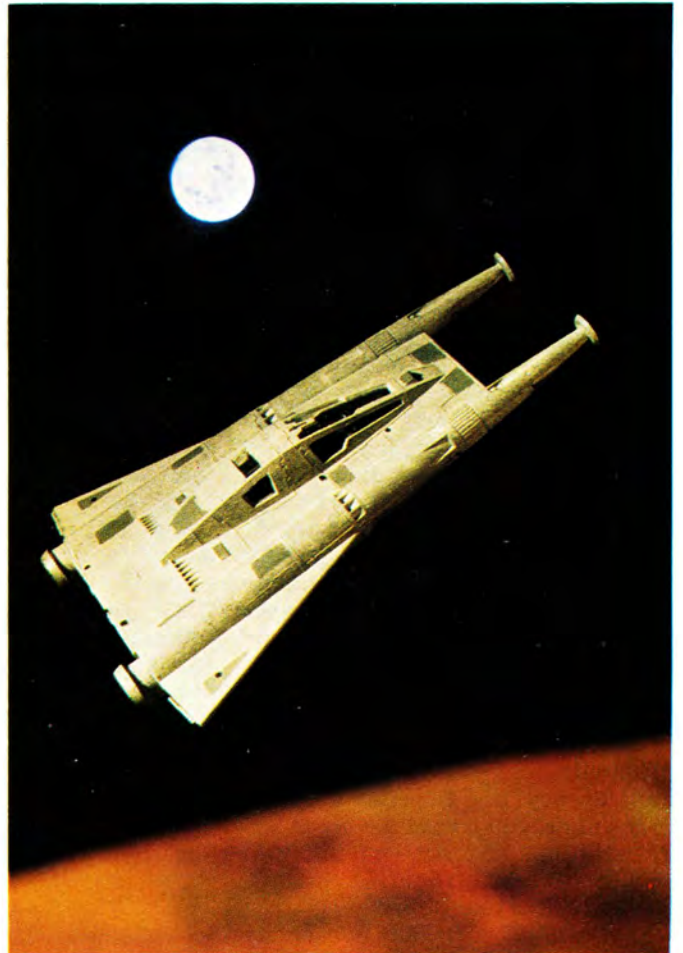




**This photo was made by twirling the wire mounted piece of cotton behind the ship for a part of the exposure. The red "star" is a red bulb exposed for the same time as the model.**



**The Abraham, made from a two liter soft drink bottle, and a number of smaller discards.**



**A modified Monogram Buck Rogers ship.**



Make notes of your exposures and drawings of your setups so that you can learn from each session. When you are finished get the film processed as soon as possible while you are still fresh on what techniques you used. By comparing your memories and notes with the finished photos, you can correct errors before you repeat them.

If after all of this you're still with me and you've got photos of your model that you are pleased with, it is now time to go for the stars . . . or at least add them to the photo. For this process it is easier to work with an 8x10 photo. However, you can certainly add stars to

curate. When working with transparency film, I recommend making two shots of each "bracketed" exposure.

A color film processor should be selected with care. Many of the "snapshot" labs offer very low prices . . . and very low quality. If you are unsure where to send your film, talk to a friend who does photography or seek out a local professional. They'll not only know the best processing labs, but they can also offer plenty of hints and tips to help improve your work. Because of the expense, I recommend getting color print film processed only and then select just the properly exposed

fact, you might even throw in a tiny spot of color here and there around space just for effect. There are several sprays on the market that can be used to put a protective coating on your finished prints.

Congratulations, if you have gotten satisfactory results you have graduated from the basic space photo course. Now it's time to move on to some more advanced techniques.

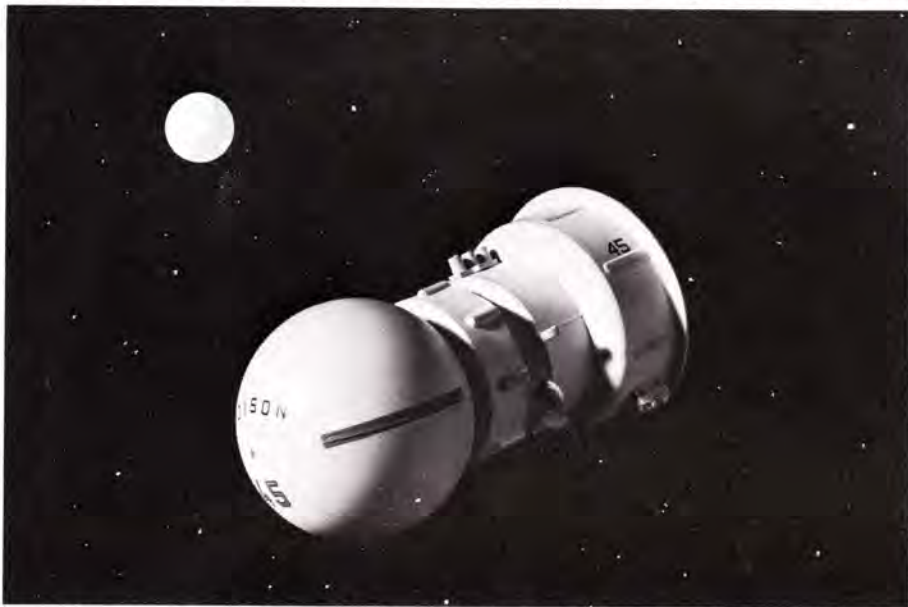
If you are doing your own black and white darkroom work, there are a number of tricks that can add interest to your photos. During enlarging, place a coin directly on the photo paper. Presto, instant sun, planet, moon or other celestial body. If you let the coin remain on the paper for only part of the exposure time, turn off the enlarger and remove the coin, then turn the enlarger back on to finish the exposure, you will get a gray effect. This looks a little more real than the stark white effect. A larger round object supported above the photo paper gives a hazy-edged effect which looks like a planet surrounded by an atmosphere. Be prepared to waste a lot of photo paper while trying to perfect these techniques.

Plenty of special effects can be achieved "in camera" in both black and white and color. A colored bulb in a black cloth shrouded socket can become a large glowing star in the background of your photos. A small wattage bulb is best since a too large bulb will spill light onto the stand or background, spoiling the effect. A larger bulb placed inside a large round light fixture can become a huge planet or sun.

A piece of colored construction paper with a rounded edge can be placed near the camera lens to give the effect of a planet surface. You will probably have to use an additional light directed at this paper for proper exposure. The camera's depth-of-field preview button is useful here to aid in placing the "planet" for best effect. This is one of those photos that will probably take several attempts to get right.

When one of my photos required an exhaust trail behind the model, I achieved the effect by mounting a piece of cotton on stiff wire and spinning it during part of a long exposure. Since I had no idea what this trick would look like, I used a full 20 exposure roll trying various combinations of exposure and light.

The techniques I have outlined are certainly not the only methods to photograph space models. They just happen to be the ones that have worked best for me. If you will take the ideas that I have presented and modify them to fit your way of working, you should soon be getting results that you will be proud of. Who knows, maybe your work will soon be gracing the pages of this magazine! ■



**The Edison was partially made from a Christmas ornament.**

even 3½x5 photos. You'll need white watercolor and your trusty 5/0 brush (that's the little pointy one). Dip the brush in the watercolor and touch the tip gently to the surface of the photo where you want the star. Now that you have created your first star, you can continue the process over the entire surface of the print and create a whole galaxy. Make some of your stars tiny points of light and others slightly larger blobs. A mistake can be carefully wiped off with a dampened cloth. You can add as many stars as you want, but the effect can be achieved with just a few.

Once you begin to feel comfortable with black and white it is time to complicate your life with color. As with black and white film, a good choice for color is a medium speed (ASA 125-200) speed emulsion. In color you have the choice of working with print or transparency (slide) films. If you are shooting the publication, you'll want to use the transparency films. Depending on your light source, you'll have to choose between daylight or tungsten film. If you are using a standard bulb in your light, you'll need the tungsten.

Exposure for color film is basically the same as for black and white except that it is much more important to be ac-

curate. When working with transparency film, I recommend making two

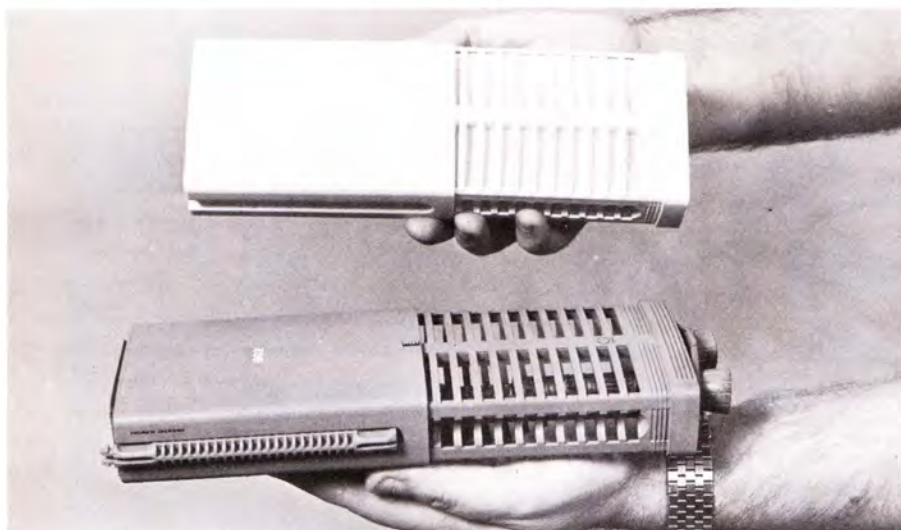
shots of each "bracketed" exposure. A color film processor should be selected with care. Many of the "snapshot" labs offer very low prices . . . and very low quality. If you are unsure where to send your film, talk to a friend who does photography or seek out a local professional. They'll not only know the best processing labs, but they can also offer plenty of hints and tips to help improve your work. Because of the expense, I recommend getting color print film processed only and then select just the properly exposed negatives for printing. Once you get your film back, you are going to want to add an appropriate star field. On transparency film the stars would photograph as clear spots in the black "space." So to duplicate that effect we are going to poke tiny holes in our slides. You should practice this technique first on some discard slides. Lay the mounted transparency on a well lit surface with the back (emulsion) side up. The emulsion side is duller than the front side and usually has "this side toward screen" printed on the mount. Take a sharp pin and push it gently against the slide. Hold the slide up to the light and you should see a "star" gleaming brightly. Repeat this process until you have all the stars you want. Bear in mind that the effect can be achieved with just a few stars. Also, be careful not to put a star in the center of your spaceship.

A piece of glass supported a few inches above your work table makes a great temporary light table. With this you can place the slide on the glass and see exactly where to place your stars. The light table is also very useful for sorting slides and viewing negatives.

Color prints can be handled in much the same way as black and white. In



For the best glue-  
ing results use the  
cyanoacrylate  
"super" glue.



The spaceship Andrew Jackson can skip over galaxies and freshen the air  
in your studio at the same time.



There are better ways to make a living, but somebody's got to do it.

# YOU ASKED FOR IT! FLOQUIL AEROSOL MA9 FIGURE PRIMER

For metal figures and  
miniatures of all types.

Now you can spray on a  
smooth, even coat of  
primer that dries skin-  
tight without plugging or  
obscuring the fine casting  
detail of your miniature.

High adherence coating  
provides an excellent  
bond to metal and is re-  
sistant to chipping or flaking. Velvety flat  
finish provides just enough "tooth" to make  
miniatures easier to paint and detail.

This neutral light gray color covers easily  
and is the perfect base coat for all water-  
based or solvent based paints.

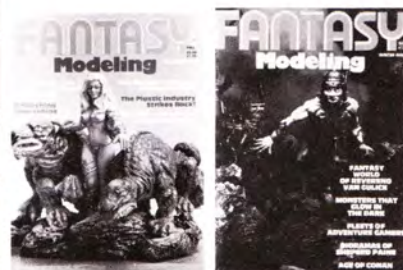
From start to finish — depend on Floquil-  
Polly S to finish your fine miniatures.

**MA9 Figure-Primer**  
5oz. can \$2.98



**Floquil-Polly S Color Corp.**  
Route 30 North  
Amsterdam, New York 12010

AN RPM COMPANY



## FANTASY MODELING BACK ISSUES

DEPT. FM5  
475 Park Avenue South,  
New York, NY 10016

___ #1—\$4.00	Postage & Handling:
___ #2—\$3.00	1 Magazine: add \$ .80
___ #3—\$3.00	First Class Postage
___ #4—\$4.00	2 Magazines: add \$1.06
	First Class Postage

Only U.S., Australia and New Zealand funds accepted.  
Note: If you don't want to cut up this magazine, please  
print your order on a separate piece of paper.

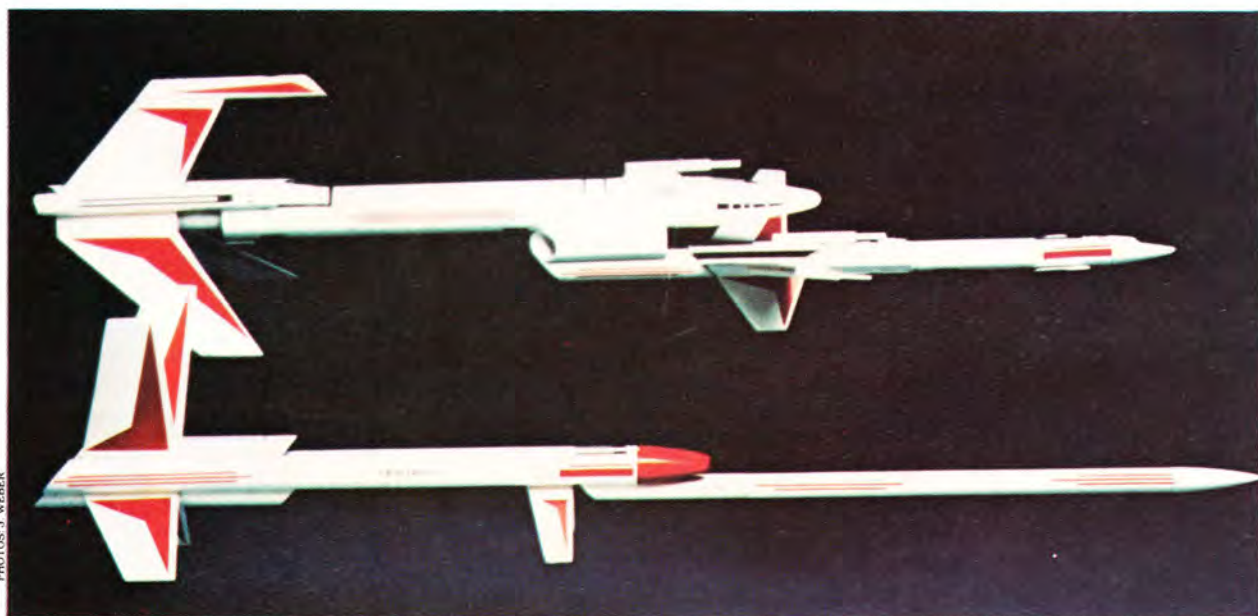
NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_  
STATE \_\_\_\_\_ ZIP \_\_\_\_\_



# ROCKETING INTO HI-TECH

By MICHAEL A. BANKS

The Latest On High-Powered Rockets,  
Computer Programming And Calculating, New  
Space Shuttles, And A Contest!



A 3-D cluster, two-stage high power bird being prepared for launch.

**W**e'll start off this installment with a few words on high-power rockets, since many of you are probably interested in them, if not already flying them. Just to be certain that we are thinking along the same lines, a high-power rocket is any rocket which is flown with more than 20 newton-seconds of total impulse. In other words, that's any rocket using more than 1 D engine, or an E or F engine.

The first word in flying high-power rockets is safety! In addition to being more powerful than the average rocket, a high-power rocket is generally heavier and sturdier than a kit off the shelf. Because of these factors, high-power rockets should be handled with respect!

The high thrust levels of these rockets require that you build them strong. This means using epoxy glues rather than the white glue you may be using to

build smaller rockets, along with strengthening techniques such as running fins right through the sides of body tubes and actually mounting them on the internal engine mount. If you use this technique (and liberal amounts of epoxy), you probably won't have to worry about fins shredding off the rocket at launch (it *can* happen).

Careful selection of materials is important, also. Balsa is not strong enough for many high-power applications, but plywood (the thin kind sold for model airplane applications) is. You may also find that stronger body tubes than those available from the larger manufacturers are required, and these are available. Body tubes approximating the size of some of the more popular sizes (such as Estes' BT-101) but with thicker walls, are sold by some of the small manufacturers listed below.

Additional techniques for increasing

the strength of high-power rockets include coating the fins and nose cone with epoxy instead of balsa filler, using additional centering rings spaced along the inside of the body tube to reduce the possibility of the tube crimping, and coating areas of the fins and body tube which might contact the ground on descent with extra layers of epoxy.

Flying high-power rockets requires more planning. A large field is a must, because the higher the apogee of a rocket, the farther it will drift. Recovery methods are critical; it is necessary to bring the rocket down as quickly as possible, but the extra weight causes problems. Most rocketeers use large (at least 6 inches x 10 feet) streamers, along with liberal quantities of "tracking powder," which is nothing more than powdered tempura paint, poured into the body tube on top of the parachute.

Extra large designs which are some-



what fragile are more easily recovered with parachutes. The plastic parachutes supplied by most manufacturers are not strong enough, however. Nylon parachutes, with sewn-in shroud lines, are ideal. You can make these yourself, or buy them from one of the manufacturers specializing in high-power rocket supplies.

Launch systems for high-power rockets, like the rockets themselves, must be strong. A launch rod 1/4 inch in diameter, and 6 feet long, is recommended. Small sections of body tube (such as Estes' BT-5) or empty mini-engine casings make ideal launch lugs for rockets using large launch rods. The blast deflector for a high-power launch system should be heavy steel, and ideally should include an "L" shaped section of small diameter heating conduit to deflect the exhaust from vertical to horizontal.

Remember, too, that no model rocket may weigh more than 16 ounces at lift-off, which includes, of course, the high-power variety we're discussing here. This isn't as much of a restriction as you might think, however.

The designs presented here are high-power birds which have been successfully flown, using the building and flying techniques just presented. Use a little common sense and a lot of caution when flying them, and you'll have many successful flights.

## FOR MORE INFORMATION

The manufacturers listed below supply high-power model rocket kits, engines, parts, and supplies, as indicated.

### ADC

6261 So. Loomis Rd., Waterford, WI 53185. *Specializes in launch towers and controllers.*

### ASTRO-DYNAMICS

P.O. Box 3043, Everett, WA - 98203. *Manufactures large kits for single and cluster engines.*

### COMPOSITE DYNAMICS

Box 5142, Torrance, CA - 90510. *Carries kits, E and F engines, and parts for high-power rockets.*

### CROWN ROCKET

### TECHNOLOGY

Box 341, Mountlake Terrace, WA - 98043. *Carries a complete line of kits, engines, and parts.*

### FLIGHT SYSTEMS, INC.

9300 East 68th St., Raytown, MO - 64133. *Supplies high-power rocket kits, parts, and engines.*

### M&J WEBER

6611 Merwin Ave., Cincinnati, OH - 45227. *Manufactures specialized parachute systems for large rockets.*

## NEW PRODUCTS

In the last installment, I mentioned Canaroc's "Starfleet" line. These are among the more interesting science-fictional kits available, and they are worth mentioning again (this time with photos!). According to Canaroc, the "Starship Antares" is a fast freighter designed to carry fuel and provisions to the Starfleet while the fleet is on patrol, and to supply remote outposts at the edge of known space. The Antares is a B or C powered kit with an impressive spiraling flight pattern.

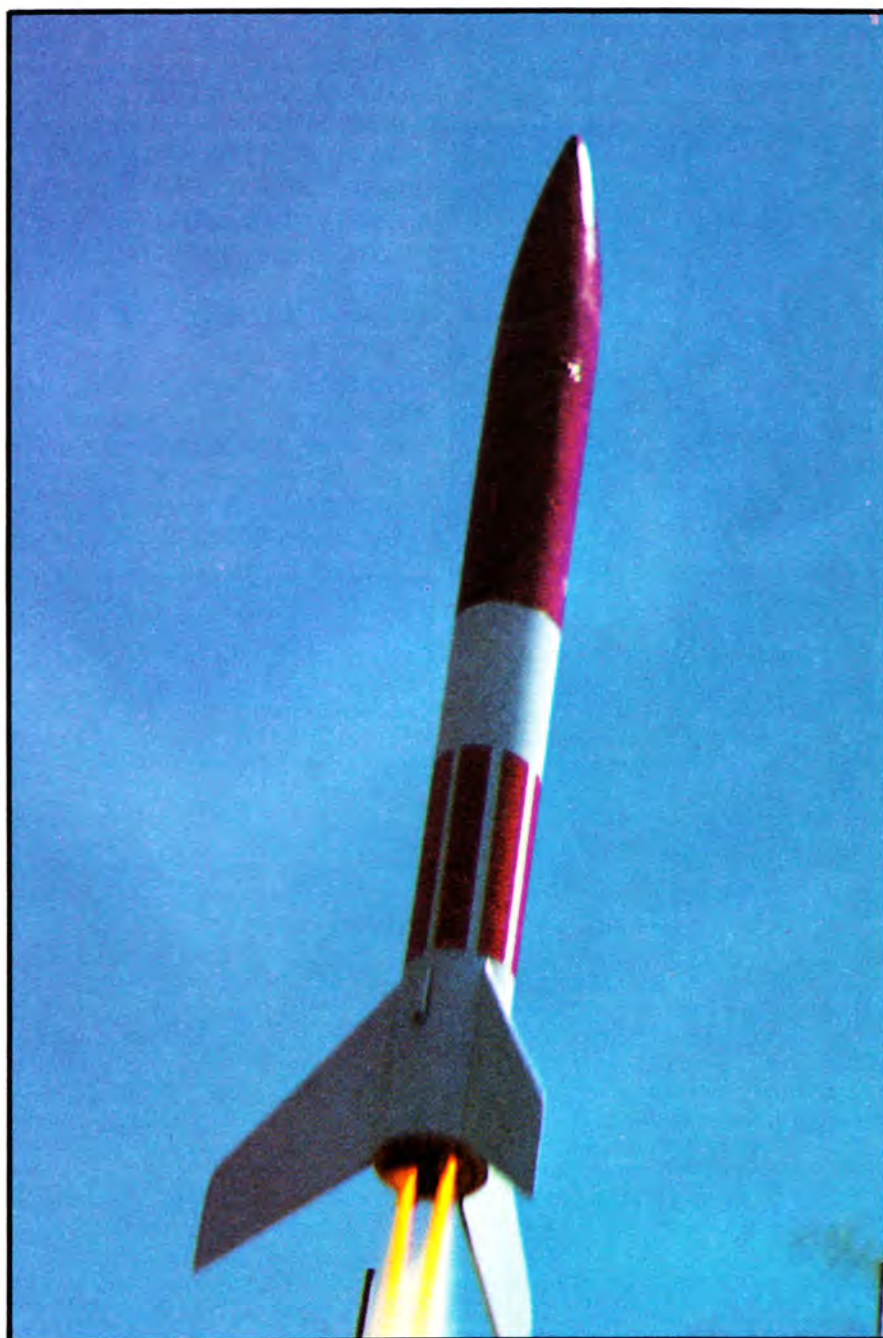
The "Starcruiser Warlock" is a multi-mission patrol craft. This model is D powered, and the forward section separates at apogee to glide to earth, while the booster is recovered via parachute.

Scale modeling buffs will be pleased to know that Canaroc offers three scale

models of Canada's "Black Brant" series sounding rocket, pictured here. Another large model is waiting in the wings, to be introduced at a later date.

Also new in scale is Centuri Engineering company's SR-71 "Blackbird," a model of the USAF's high-altitude photo recon aircraft. This is a large (over two feet in length) model, D powered. Centuri plans to introduce more scale kits in the future, and this is welcome news. Unfortunately, the scale model of the "Tomahawk" (the Navy cruise missile) has been cancelled, even though it appears in the current catalog.

Those of you who are new to model rocketry will be interested in the new series of Skill Level 1 (Beginner) kits introduced by Estes Industries this year. In addition to being simple to build and easy to fly, the new kits are



**A high-powered rocket roaring into the sky. Power is a 2-engine D cluster.**



eye-catching. The lineup includes the "Comet," "Star Dart," "Spin Fin," "Bat," "Meteor," and "Falcon Commander" kits.

## CALCULATORS AND COMPUTERS

Mathematics can be a great asset to the design of model rockets, and an invaluable aid in predicting model performance. Math can also be a bore, especially if tedious calculations are involved, as is often the case with model rocket design.

Fortunately, the programmable calculator and personal computer exist to ease the burden. Used in conjunction with the proper reference material, calculators and computers can open a new level of model rocketry to those looking for "something more."

Among many others, the following manuals and books will aid you in formulating equations and operations pertaining to aerodynamics, thrust, or any other design or performance aspect of model rockets:

- Stability of a Model Rocket in Flight* (Centuri)
- Calculating the Center of Pressure of a Model Rocket* (Centuri)
- Model Rocket Altitude Performance* (Centuri)
- Aerodynamic Drag and Model Rockets* (Estes)
- Topics in Advanced Model Rocketry* (W. Bengen)

Those who own a programmable calculator will find *Countdown: Skydiver, Rocket, and Satellite Motion on Programmable Calculators*, from Dilithium Press, very useful. The programs in this book are intended for use with the TI-57 and HP-33E calculators, but many can be adapted to other programmables. The programs presented under the "Rocket" heading all apply to model rockets, and the "Skydiver" programs may be of use in calculating model rocket performance during descent.

In any case, it is possible to formulate your own programs using the data supplied in the five books mentioned above.

There has been very little published on model rocketry applications for personal computers. Estes Industries' *Educator News* has printed several programs by G. Harry Stine and others, and some few model rocket club newsletters have printed programs, but there is little else available.

If you own or have access to a personal computer (or something more powerful), you will find it easy to put together programs based on available reference material—if you are proficient at programming and mathematically inclined.

For those of you who are not inclined

toward programming or math, here are two simple programs dealing with model rocketry. Both are written in Level II BASIC for the TRS-80, but should be easily adaptable to any BASIC language.

The first program deals with aerial photography, which we discussed in the previous column. This program makes use of the equation used to determine the altitude from which an Astrocams photo was made.

### PROGRAM LISTING

```
5 REM "ASTROCAM ALTITUDE
  CALCULATOR"
10 REM "COPYRIGHT (C) 1981, BY
  MICHAEL A. BANKS
15 CLS:PRINT:PRINT
20 INPUT "ENTER THE LENGTH—
  IN METERS—OF AN OBJECT
  SHOWN ON THE GROUND IN THE
  PHOTO:";A
25 PRINT:PRINT
30 INPUT "ENTER THE LENGTH—
  IN MILLIMETERS—OF THE SAME
  OBJECT ON THE NEGATIVE:";B
35 PRINT:PRINT
40 PRINT "THE ALTITUDE OF YOUR
  ASTROCAM WHEN THIS PHOTO
  WAS "
45 PRINT "MADE WAS "A*30/B
  "METERS."
50 PRINT:PRINT
55 STOP
```

If you want the altitude in feet instead of meters, change line 45 to:

```
45 PRINT "MADE WAS
  "A*30/B*.364533 "FEET."
```

If you want to know the maximum altitude of a rocket, but don't have an Astrocams handy, you can determine it by having a tracker stand at least 300 meters from the launch pad. The tracker's function is to measure the angle observed at the rocket's apogee by sighting the rocket through a tracker available from Estes Industries or a similar device. The trick is to measure the angle made by the horizontal line (baseline) between the tracker and the pad, and the imaginary line between the tracker's position and the rocket at apogee.

### PROGRAM LISTING

```
5 REM "MODEL ROCKET
  ALTITUDE CALCULATOR"
10 REM "COPYRIGHT (C) 1981,
  BY MICHAEL A. BANKS"
15 CLS:PRINT:PRINT
20 INPUT "WHAT WAS THE
  DISTANCE OF THE BASELINE
  (DISTANCE FROM THE
  LAUNCHER TO THE TRACKER)
  IN METERS";A
25 PRINT:PRINT
30 INPUT "WHAT WAS THE
  ANGLE MEASURED BY THE
  TRACKER AT THE ROCKET'S
  APOGEE";B
35 PRINT:PRINT
40 PRINT "THE ALTITUDE OF
  THE ROCKET AT APOGEE"
45 PRINT "WAS
  "TAN(B*.01745329)*A" METERS."
50 PRINT:PRINT
55 STOP
```

## CONTEST

Do you fancy yourself a skilled designer and craftsman? If so, enter the Model Rocketry Photo Contest. This competition is exclusively for the readers of FANTASY MODELING, and the rules are as follow:

- 1) There are two categories of competition: Flying and Static. Entries in the Flying category must be obviously stable model rockets designed to fly. The entry may be an original design or built from a kit. (If you are building your own design, remember that one of the requirements of a stable rocket is a large rear fin area; look over existing kits as a guide.) Entries in the Static category must be original designs, not built for flight. (These may be built from any available items, or "kitbashed.")
- 2) There are three age groups: 8 to 12, 13 to 19, and 20 and over.
- 3) You must submit either one or

two color photos or color transparencies (slides) of your model for judging. If you wish to have your photo(s) returned, be sure to include a self-addressed, stamped envelope. (No photos will be returned without an SASE!)

Write your name, address, age, and the category you are entering on the back of each photo submitted.

- 4) Send all entries to: "Rocketry Contest," P.O. Box 312, Milford, OH - 45150. Deadline for entries is February 1, 1981. Winners will be announced in a future issue of FANTASY MODELING. (Do not send entries to the magazine.)

Be sure to submit the best photo(s) possible, to show your models best features. Prizes will be furnished by Centuri Engineering Co. and Estes Industries, and winners will be notified by mail.



If you want the distance in feet, enter feet instead of meters.

These programs are very simple, both to use and in operation. In the next issue, we'll run a more complex program.

## SPACE SHUTTLE ROUNDUP

Has the success of the *Columbia* gotten you interested in modeling the space shuttle? There are several flying models of the shuttle available from the manufacturers.

Centuri offers a semi-scale (otherwise known as "profile scale") model of the *Columbia*. Although it only superficially resembles the real thing, it flies beautifully. Estes provides two models of the shuttle. One is a 1/162nd scale model which includes the External Tank and Solid Rocket Boosters—the full flight configuration of the shuttle. The second Estes offering is a 1/87th semi-scale (H.O. scale) model which flies in an interesting spiral pattern.

The "full configuration" model of the

shuttle by Estes features a realistic flight profile, with the shuttle returning as a glider while the booster is recovered via parachute. The larger Estes shuttle utilizes parachute recovery.

Both Estes and Centuri also offer models of earlier versions of the shuttle which were under consideration by NASA in the early- and mid-1960's.

In the last issue, I mentioned that we would be discussing flying aircraft models. Actually, the discussion covers converting plastic models to fly (aircraft and spacecraft), but we'll have to wait until the next issue for that because some of the illustrations for that topic are unavailable at the moment. (Included will be a plan for converting MPC's plastic model of the "Colonial Viper," of *Battlestar Galactica* fame.)

That's it for this issue. Fly 'em high!

## ADDRESSES

The list following includes all organizations and companies mentioned in this column whose addresses were not

otherwise listed in the column, and is provided for your convenience:

CANAROC  
Dept. F, 43 Hanna Ave.  
Toronto, Ontario, Canada, M6K 1X6.

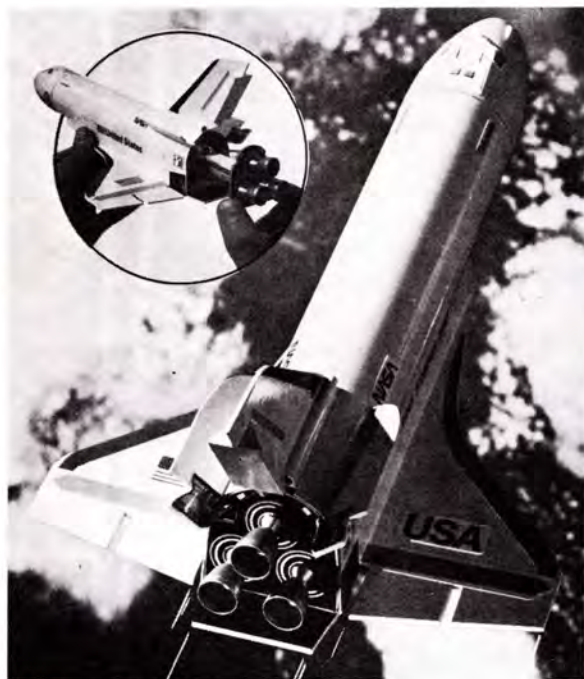
CENTURI ENGINEERING CO. INC.  
BOX 1988, Dept. M  
Phoenix, AZ - 85001.

DILITHIUM PRESS  
P.O. Box 92  
Forest Grove, OR - 97116.

ESTES INDUSTRIES  
Dept. B  
Penrose, CO - 81240.

NATIONAL ASSOCIATION OF  
ROCKETRY  
182 Madison Dr.  
Elizabeth, PA - 15037.

W. BENGEN  
10 Ursular Ct.  
Smithtown, NY - 11787.



Centuri's Space Shuttle Columbia

The Bat (Estes)



Sark (Estes)





For small models, even the .010 inch sheeting will be too thick. If this problem arises, it is best to mask and airbrush the plate on. Use a slightly darker or lighter shade of the same color and you will have a realistic appearing armor plate.

A plate can be made to look like it was replaced or repaired by using an even darker or lighter shade or by changing the entire color. The Millennium Falcon miniature has many of these "repaired" panels on the top and bottom surfaces.

To cut the sheet styrene, a #11 X-acto knife works best (remember use a metal straight edge for accuracy). Any number of shapes can be cut from the thin styrene and the plates can be butted together like a jigsaw puzzle or stacked on top of one another to make thick sections on a models surface.

Sanding is best accomplished with inexpensive and long lasting emery boards (found in drug stores). These "mini-sanders" work best to clean the rough edges left after cutting with the X-acto. For smoothing, use #600 wet-n-dry sandpaper (dry).

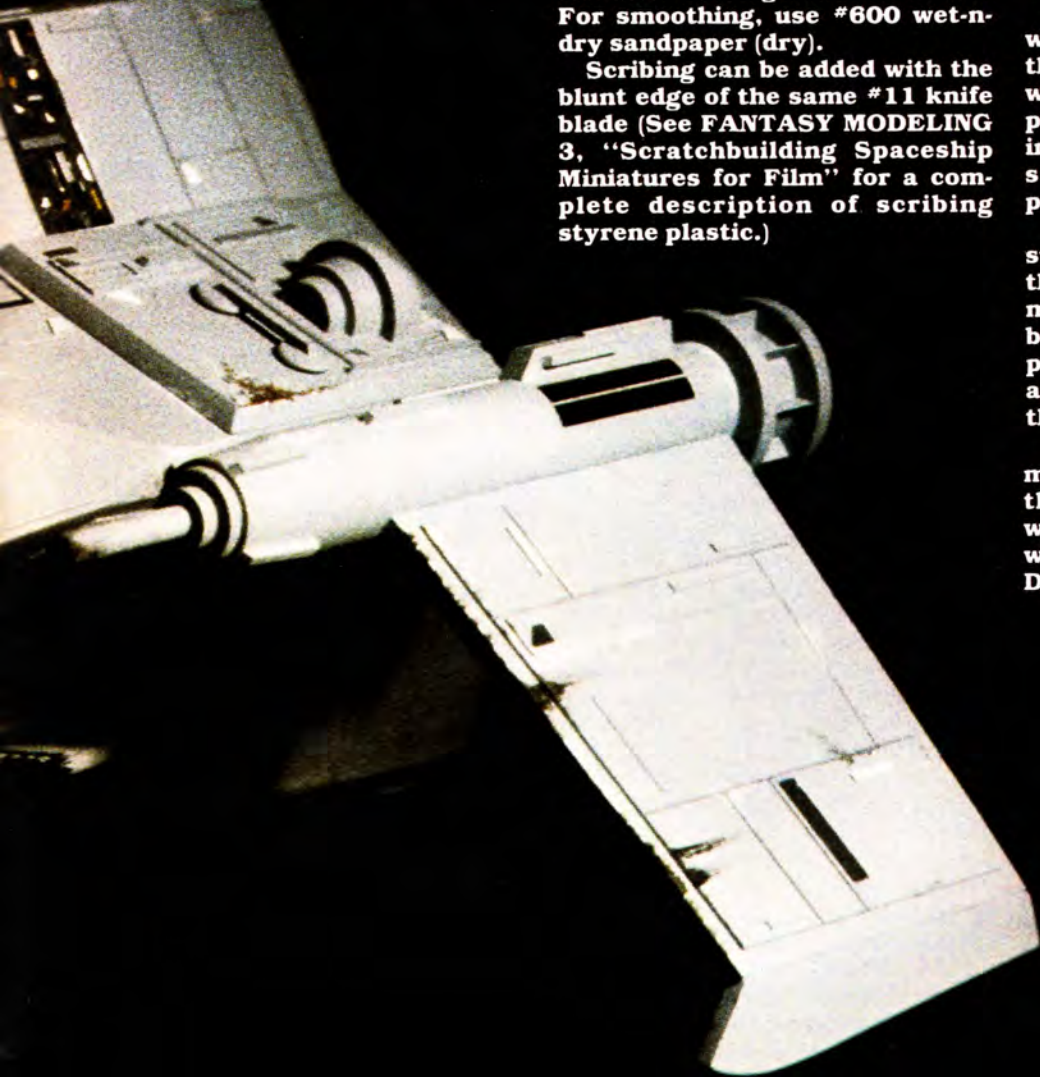
Scribing can be added with the blunt edge of the same #11 knife blade (See FANTASY MODELING 3, "Scratchbuilding Spaceship Miniatures for Film" for a complete description of scribing styrene plastic.)

The U.S.S. Overton miniature (named after fellow modeler Rick Overton) began life as a plastic 16mm film can. I wanted to build a circular spaceship for some time and when I found the film can (in a trash container) I knew it would work out wonderfully. The model would be built as an intergalactic trading ship and thick armor plating was added to both the upper and lower surfaces. This armor, built over critical sections of the ship, seemed a necessary addition to protect the craft from "space pirates."

The overall layout of the armor was first drawn on the surface of the model in pencil. A template was then made for each of the plates out of thin paper. Each .015 inch thick plate was then cut to size following the template patterns.

After sanding the edges and surface smooth, each plate was then cemented in place on the model. Some areas were further built up with the same thickness plate. Up to three levels were added to some areas to build up the thickness (up to .045 inches).

Negative cut-out areas were modeled into the upper surface of the miniature. These cut-outs were detailed from the underside with cut sections of an MPC Star Destroyer kit.





# SUPER DETAILING SPACESHIP MINIATURES

By JEFF POLLIZZOTTO

## INTRODUCTION

**T**here are many different techniques that can be used to super-detail spaceships. The following article is an examination of some of the basic ways I have used over the years to detail my own spaceship miniatures. Not all the techniques discussed can be applied to every design. It will depend on the style of ship you plan to build and the construction techniques used.

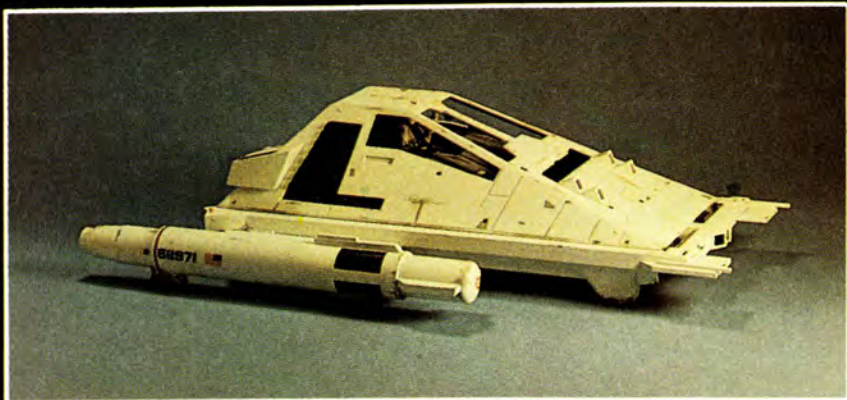
There is a big design difference between the Buck Rogers ships of the '50's and today's Empire Star Destroyer. The superdetailing techniques that follow are best used for the modern style ships but with a little creative imagination can be used to update almost any design.

## SURFACE OR ARMOR PLATING

Surface detail for spaceships comes in many shapes and forms. By far the most basic and simple to model is armor plating.

The popular sheet styrene manufactured by Evergreen, Inc. (1717 N.E. 92nd Street; Seattle, WA 98115) can be used to model a wide variety of plate surfaces on a miniature. Thickness of the individual sheets start at .010 inch and range up to .060 inches. For typical armor plating on a twenty to thirty inch miniature, the thinner .010 and .015 inch sheeting is ideal.

When applying armor plating, keep in mind that it must be kept in scale with the size of your miniature. Nothing will make a miniature look "fake" quicker than out-of-scale (either too thin or thick) surface armor.







Upper surface of Millennium Falcon model showing "laser cannon hit" detail.



Underside of same battle damaged area revealing layered plastic technique for adding "laser hits" to miniatures.



Upperside aft engine area of Falcon showing modeled on surface detail.



Falcon cockpit parts after superdetailing. Note headrests.



Completed Falcon laser cannon and turret after superdetailing.

Over: The STARFIGHTER

## SURFACE DETAIL

Surface detail is a second form of super detailing that I use for miniatures. The most famous Hollywood SPFX miniatures use a large amount of surface detailing taken from stock tank kits. Not only tank, but ship, aircraft, car and other spaceship kits provide a wide variety of parts that can be incorporated into your own spaceship designs.

When using stock "out of the box" kit parts, I always rework them. There is nothing worse than someone looking at your spaceship and saying, "That's a supercharger from a '57 Chevy, isn't it?"

One area of available parts can be easily overlooked by many modelers. The kitchen and bathroom are gold mines when it comes to finding parts. Toothpaste tops, instant coffee lids or laundry detergent caps are excellent "throw-aways" that can be incorporated into your miniatures.

Even the office can be a source of available parts. Typewriter ribbon spools and the newer type cartridges are but two of the "throw-aways" found in an office.

You should start saving these parts yourself, but another way to start collecting these "throw-aways" is to ask family and friends to save these items for you. You'll get some strange looks, but it is well worth the trouble.

Plastruct (1020 S. Wallace Place; City of Industry, CA 91748) has an extensive catalog of parts that are easily worked into a spacecraft design. Concentric reducers, rings, pipe caps or support flanges make great surfacing parts. The parts can be used right from the catalog, reworked or combined with other Plastruct or stock kit parts.

Similar applications can be found for Evergreen parts. A large selection of strip styrene in various train scales is available and offer an endless array of possibilities for detailing.

The Millennium Falcon kit by MPC is a well detailed kit but upon closer inspection, lacked detail in certain areas. Using the box cover photo, *The Star Wars Sketchbook* and *Famous Spaceships of Fact Fantasy* as research, I noted that much of the missing detail could be modeled on with Plastruct, Evergreen and brass rods and parts.

The areas lacking in detail were the sides around the entire ship (I was surprised to find so much detail missing in this area), the center ridge above the cockpit area and the upper surface at the aft of the ship.

Following the basic shapes found in the photos, I cut Evergreen strips of various sizes and cemented them on the surface of the model. The entire model was detailed in this fashion first. Brass rods added to the sides and upper

rear surface completed the effect. This method was also used with success on the surface of the U.S.S. Overton model.

## MODIFYING KIT PARTS

The Falcon cockpit lacking any interior detail was superdetailed using Evergreen sheet and strip stock. Parts from the Empire Star Destroyer provided parts for constructing the missing instrument panel.

The first step was to discard the clear wall which attaches to the aft end of the cockpit. Following photos found in the books mentioned, a new back wall with the passage way door was modeled using sheet styrene. Details were added to the wall with small bits and pieces of various size strip stock. The instrument panel was then detailed with the same cut strips of Evergreen plastic to simulate buttons and displays.

The outside of the cockpit lacked as much detail as the interior so it was worked on next. Extra "ribs" were added to the windshield frame and the surface of the cockpit was detailed with strips of styrene. The *Star Wars Storybook* has an excellent photo of the underside of the Falcon cockpit (the only photo I've found thus far). The plate that is on the bottom of the cockpit was cut from a .010 inch thick piece of styrene and cemented in place.

The top and bottom turrets and laser cannons were the next parts worked on. The turrets and guns were modified into more realistic representations of the actual miniature guns with strips of evergreen plastic.

## SCRATCHBUILDING PARTS

You need not have years of modeling experience to scratchbuild your own spaceship parts.

The double wheel space station was kit-bashed by combining two Lindberg Star Probe Space Base Kits (#1148) with one Star Probe Space Shuttle Kit (#1147). I planned to update and modernize the model so the addition of a new power source seemed appropriate. The "Mercury Boilers" supplied with the kit were left off in favor of dual solar collectors.

Sheet styrene provided the basic structure for each solar panel. An 1/8 inch was then cut to size and used to edge each collector. A prescribed Evergreen sheet was then cut into squares and cemented to the centers of each angled panel. Each solar panel is made up of six square panels cemented together at 45 degree angles. They are mounted to the upper wheel with the side beam supports taken from the Lindberg Space Shuttle kit.

The shuttle craft was equipped with dual warp drive engines constructed out of Plastruct tubing. A 5 inch long section of 1 inch tubing is the main





**Space station miniature is kit-bashed with three Lindberg Star Probe kits.**

**Solar panels were scratch built using Evergreen sheet and strip stock.**

"engine." Two sections of 3/4 inch tubing were cut and cemented to either end of the larger tube. The forward tube is capped with a 3/4 inch dished tubing head and the exhaust end with a 3/4 inch concentric reducer.

This larger size tubing is very difficult to find in hobby shops so ordering from the Plastruct catalog is a must.

The landing legs built for the U.S.S. Overton are a combination of kit parts and scratchbuilt "foot pads." Each "foot" was cut and formed from the thick plastic originally cut from the central areas of the 16mm film can. The edges are beveled and three 3/16 inch ribs make up the bottom half of each "foot." The top surface is detailed with sheet and strip stock. The leg uprights are the "rocket supports" pirated from the Star Probe U.S.S. Explorer kit (#1149). They were extended with Plastruct clear coupling sleeves.

### BATTLE DAMAGE

I first discovered a way to add realistic "laser cannon hits" to a miniature when assembling the Falcon kit. While researching detail for the miniature, I noticed that many areas on the original SPFX model used in the film were moderately battle damaged.

The largest "hit" is on the nose area, just aft of the right side "mandible." Many smaller "hits" are scattered along the upper surface of the Falcon and can be located by checking through the research books.

Outlining the shape of the main hole is the first step in modeling the battle damaged area. The inside of the outline

is then drilled out using a micro-drill. The center section is then removed and the edges are knicked up with a sharp X-acto knife. Nick both the upper and lower edges of the hole for a more realistic "blown-out" look.

Smaller nicks are then modeled into the surface of the miniature surrounding the larger main hole.

In theory, a "laser cannon" is a high heat weapon that would melt through the surface of whatever ship is unfortunate to pass in front of the beam. With this in mind, the rest of the "hit" can be modeled.

Three layers of .015 inch thick sheet styrene are each drilled and roughed out (the same way as the main hole). Each layer is made slightly smaller than the one above until the last layer (in the Falcon's case: the third) which is only roughed up. The sheets are then cemented in place from the underside. When done correctly, the "hit" will look like the surface of the ship was partially "melted through."

This technique can be applied to any spaceship that requires realistic battle damage detail. Some minor "hits" were modeled on the surface of the U.S.S. Overton using this technique.

### CONCLUSION

When building your next spaceship miniature, try the superdetailing techniques I have discussed. You will find your kit-bashed, stock or scratchbuilt model will take on a new dimension and become a fine scale miniature you will be proud to display or use in your next space epic.

## NOW, 25MM ACTION-POSED FANTASY FIGURES SO REAL YOU THINK THEY'RE MOVING!



Heroes, villains, barbarians, women and monsters in action poses, along with special characters such as left-handed fighters. Not only do we have the newest and best line of figures, we

also have micro space ships, solo dungeons and playing aids, naval models, SF and fantasy books, games, dice and much, much more.

Our 40-page, illustrated catalogue has thousands of fantasy, SF and wargaming items. Hundreds more than anyone else. To obtain this great catalogue, send 40¢ for postage to: AT-PAK, 314 Edgley Ave., Glenside, PA 19038. DEALERS CALL (215) 887-3876.

\*INCLUDE THE COUPON AND GET A FREE FIGURE

**ONE FREE**



## SCULPTOR WANTED

Top miniature manufacturer seeks sculptor with imagination and eye for detail. Send sample of work and resume to:

Kim Eastland, Department M  
Price & Pine Streets  
Holmes Office & Industrial Center  
Holmes, PA 19043

212  
582-1272

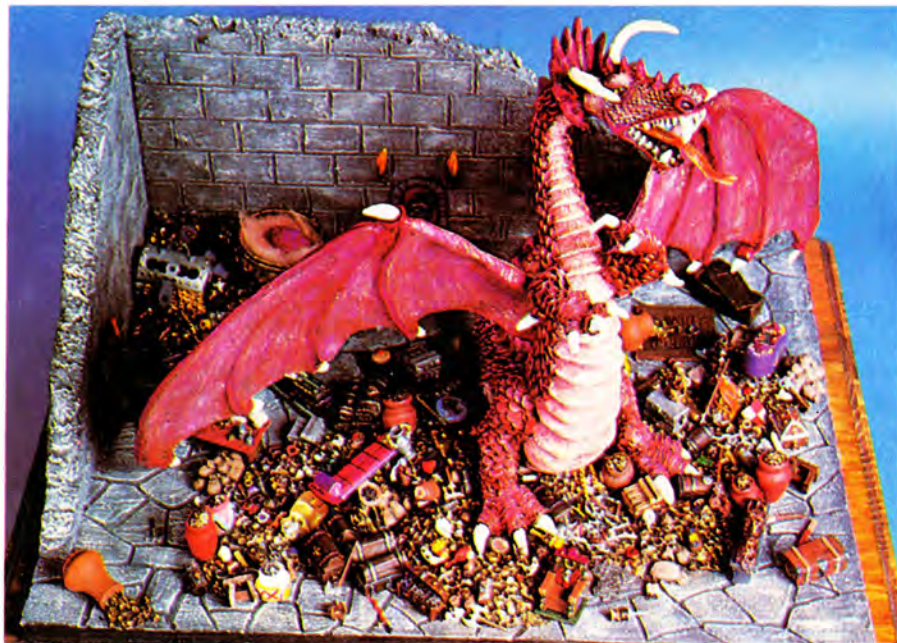
THE  
COMPLETE  
STRATEGIST

Fantasy Game Center  
Wargame Headquarters  
for Greater New York

212  
582-1272

11:00 A.M. TO 8:00 P.M. - MONDAY - SATURDAY  
320 WEST 57th STREET, NYC, NY 10019





**Eric Heap's Best of Show winner,  
"Red Dragon's Treasure Trove."**

## GEN CON FANTASY CONVENTION

By PHILIP O. STEARNS

**I**n the peaceful rolling hills of Wisconsin lies its University campuses, where in Mid-August the TSR-sponsored Gen Con took place. The setting was absolutely marvelous although I thought a tiny bit strange for this conglomeration of avid war gamers and fantasy freaks. However, the enthusiasm generated by this event was well worth the trip. There were literally thousands of people watching or participating in this mini-battle of the titans, and from early morning until late in the evening for four days the participants struggled away in their

chosen fields while the manufacturers did a thriving business. It was a great opportunity for many devotees to meet one of the greatest fantasy artists, for our friend Boris Valejo was there to meet and sign autographs for all.

Your editor was asked to join a panel of Judges for the painting competitions and, as you will see by the photographs, there were some very outstanding pieces, particularly when one considers the miniscule size of the figures involved. Eric Heap's "Red Dragon's Treasure Trove" was Best of Show winner and deservedly so for although it

had an enormous dragon the trove was all in 25mm and meticulously painted. Another most impressive piece was James Zylka's 25mm "Winged Polish Hussars" whose range of different horse and rider coloring was superb. Bruce Roeder's 15mm "King Charles and his Guard" was amazing in its incredible detail while "Conran and his Body Guard" in 25mm by Mike Smul was also impressive. For imagination Tim Elliot must be acclaimed for his "Cave of the Cyclops." All in all this venue was a delight in its concept, its setting





Among the many brilliant winners in the Glen Con Competition were James Zylka's 25mm "Winged Polish Hussards" (Top Left); Mike Smul's 25mm "Conan and his Body Guard" (Top Right); Tim Elliot's "Cave of Cyclops" (Middle Left); and other imaginative works including many hotly contested war games pictured above.



# BOOK REVIEWS



## WONDERWORKS, SCIENCE FICTION AND FANTASY ART, by Michael Whelan.

Any sci-fi or fantasy reader who picks up this splendid volume will at once recognize some familiar imagery, because the art of Michael Whelan has already graced the covers of a handsome number of books.

More often than not, the author hasn't got peep to say about what will appear on the jacket of his book. And, equally often, the art on the cover, even though it may be quite good on its own merits, bears little relation to what the reader will find inside. This, of course, is the frequent result of several departments within a publishing house each going their own way.

For example, once an author is lucky enough to attract the attention of an acquisitions editor who may or may not offer some suggestions on how he might like to see the work in its finished form, a machinery sets into motion which takes virtually all that follows out of the author's hands—unless he is well known and solidly established.

Once the work is put on the "future releases" schedule, the manuscript goes to production for typesetting, galley proofing and, finally, printing, while the art and promotion departments, armed with the synopsis, develop cover design, cover texts and advertising blurbs.

Now comes the rub. If there is a sufficient time spread between the commissioning of the cover and the time the copy camera needs it to set cover production into motion, the cover artist may get to see what's going to be in the book. If not, the synopsis will have to do. If the cover artist is a jaded pro with a dozen other things on the burners, it

won't make much difference whether he sees the text or not. Thus, we often get to see covers that often bear little relationship to what is in the book or, far worse, the contents will be different from what the cover led us to expect.

Thus, the work of Michael Whelan comes as a happy surprise to some well known authors, who have lent their words to his beautiful pictures.

Michael Moorcock says: "... "He seems to be able to cater for the genre demands (mostly muscle beach) whilst giving a decent interpretation of the characters and moods of the books.

Anne McCaffrey of Dragonflight fame, experienced relief noting that "... "Leessa (was), for once, appropriately clad for dragonriding," and finds it noteworthy that he had actually read her books! Poul Anderson adds his weight with the significant phrase "... "just what I was hoping to convey."

There are more accolades from Gerald W. Page, C.J. Cherryh and Alan Dean Foster, which add but more fuel to the fire.

Wonderworks is an admirable record of a young artist's work which merits its space on the shelf of any sci-fi or fantasy reader. Or, if you wish to decorate your den, get two copies, one to save and one to take apart for framing. You've probably spent more than the price of this fine book (\$7.95) for that one print you may have hanging on the wall now.

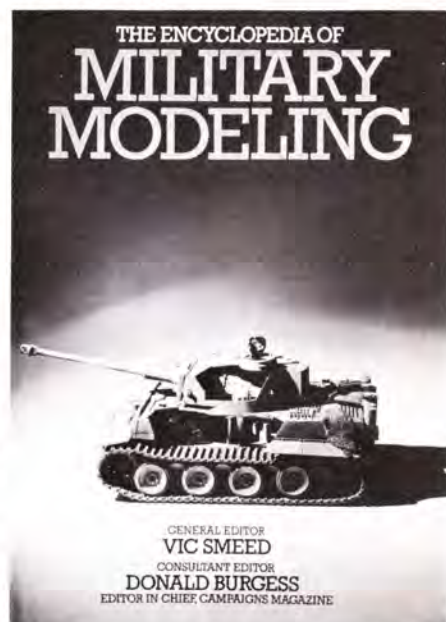
By Richard Riehn



## FIRE OF LIFE, THE SMITHSONIAN BOOK OF THE SUN.

Here is a book on natural phenomena, much of which is easily as provocative reading as sci-fi or fantasy. A magnificent color production of some 260 glossy pages; the Sun, its place in the Cosmos and man's relationship to it are traced in a most entertaining, thought

provoking and educative manner. Even a degree of not-so-distant sci-fi comes into play during the final section on solar power. Whether you are simply an Earthling or cosmic minded, this volume is a treat for the eyes and the mind. Cover Price \$24.95. And that's not a rip-off!



**THE ENCYCLOPEDIA OF MILITARY MODELING** General Editor: Vic Smeed Consultant Editor: Donald Burgess, Editor in Chief, Campaigns Magazine. Published by Octopus Books Limited, 59 Grovenor Street, London W-1 Price: \$12.98.

Having glanced at this book you are first going to ask, "In this day and age a 200 page book with color photographs and illustrations on every page! How can they do it?" Well to me all I can say is "Well done Octopus and its about time." This is a book that enjoys the advice and technique of every sound and capable modeler in England and, with the exception of my good friend and fellow editor on *Campaigns*, Donald Burgess, is entirely British in concept. This said, it must be admitted that our British cousins have long been keen and really superb artisans in the miniature field. This book covers every aspect of military miniatures from kits to scratch built figures, from ancient to modern times including vehicles, and artillery. It includes a very sound chapter on "How To Start" and then continues on to cover the whole panoply of this most enjoyable and stimulating hobby. Once more I am forced to say that if you combine this excellent book with Sheperd Paine's you will have everything that you will ever need in terms of instruction. ■



## THE GREAT PLASTRUCT MYSTERY

I loved Jeff Pollizzotto's article, but I can't find the address of the "invaluable Plastruct catalog . . ."

Michael Ward  
12248 Bristow Road  
Bristow, VA, 22013

PS: I enjoy your articles on science fiction miniatures. Keep them coming.

In the latest issue of FM (No. 3) there was an article by Jeff Pollizzotto . . . In it, a company called Plastruct is mentioned . . .

Ian Pari  
1252 N. Ventura St.  
Anaheim, CA 92801

In your 3rd issue of FM . . . Jeff Pollizzotto . . . referred to the Plastruct catalog and Evergreen strip styrene stock parts . . .

Steven J. Hoesser  
664 N. Faidley Pl. (Atp. 4)  
Grand Island, NE, 68801

We, too, had some trouble finding the Plastruct address. But, at last, we did: Plastruct, Inc., 1020 South Wallace Place, City of Industry, CA 91748. Evergreen is unknown to us. But try also: Special Shapes Co., PO Box 487-R, Romeoville, IL 60441. Both firms publish a catalog which is available for a small service charge.

## SCULPEY?

I recently picked up a copy of your magazine while shopping in my favorite hobby shop. I was very pleasantly surprised! I had never really considered the prospect of doing fantasy dioramas until I got a look at your articles on Rev. Van Gulik and Sheperd Paine . . . Please do an article on materials . . . various brands and types available . . . For example: what is Sculpey?

Joe Masset  
4 Eisenhower Rd.  
Ceneterach, NY 11720

*Discussions of methods and materials will be a standard feature of FANTASY MODELING in times to come. As for Sculpey, it's a putty-like substance which remains pliable until baked, when it becomes rock-hard.*

## GOT US!

At last! A magazine that finally caters to the more imaginative aspects of military or semi-military modeling . . . I have two queries which I hope you will be able to answer . . . are there any modeling companies that produce a 54mm sabre tooth tiger? . . . a 54mm figure of Elric of Melnibone (or any other non-muscular figure that would serve as a facsimile)?

Mr. E. Bayne  
66 Golders Rd.  
Upper Hutt, New Zealand

*The ball is in your court, dear readers and advertisers.*

\* \* \*

*Here, for your convenience, we present a modest sampling of manufacturers' addresses:*

Monarch Miniatures  
P.O. Box 4195  
Long Island City, NY 11104

Greenwood & Ball, Ltd.  
61 Westbury Street  
Thornaby-on-Tees, Teeside, UK

Phoenix Model Developments  
The Square  
Earls Barton, Northants, UK

US Distributor:  
Cpl Tuna Supply Co. Inc.  
855 Mayfair Road  
Akron, OH 44303

Superior Models, Inc.  
2600 Philadelphia Pike  
Claymont, DE 19703

Heritage Models, Inc.  
14001 Distribution Way  
Dallas, TE 75234

Valiant Miniatures, Inc.  
97 Hickory Commons  
Antioch, IL 60002

Little Generals Miniatures  
11515 Wornal Street  
Kansas City, MO 64114

Imrie-Risely Minatures, Inc.  
P.O. Box 89  
Burnt Hills, NY 12070

## HELP!

Want to drive a fantasy figure freak nuts? Show him beautiful new figures and don't give the addresses!!!!

Carl Berger  
220 Centre Street  
Beach Haven, NJ 08008

*See below and also read the editorial in this issue.*

## OPTICAL PROBLEMS

In your Winter 1981 issue, you have three excellent dioramas by Sheperd Paine. In these . . . he used optical fibres extensively . . . but I am unable to find them in my area . . .

James Staley  
7000 NW 13 St.  
Oklahoma City, OK 73127

*Have you looked in a store specializing in electronics rather than a hobby store? If you can't get any action there, send for the catalog of the American Science Center, 5700 Northwest Highway, Chicago, IL 60646. It is loaded with associated equipment useful to the diorama builder.*

## LOOK HERE

I am interested in Grenadier Models . . . Only need a few pieces . . . Price . . . ? Can't find them here . . .

John Sinsha  
306 So. 31st St.  
Fort Pierce, Fla. 33450

*Grenadier Models is a regular advertiser in FM. Why not drop them a line and get the answer from the horse's mouth?*

## RAL WHO?

In your premiere issue of FM you have an article about "Origins 80." In that . . . a picture captioned: "Best painted Byzantine Unit, Ral Partha." Can you tell me . . . by what company they are made?

John Meyers  
191 Birch Rd.  
Fairfield, CT 06430

*Ral Partha is the maker and if you'll check the inside front cover of your premiere issue of FM, you'll find their ad.*



**R**al Partha produces a new set of superb 25mm little pieces, which must delight every fantasy aficionado, including one of the best dragons I have yet to see stalking along most provocatively. Other pieces are a mounted and standing knight, a wizard, an unclothed lady, a hunchback and a delightful beastie. All these are exquisitely executed as is always the way with this firm.

Cliff Sanderson for Monarch Miniatures gives us a plethora of outstanding figures to choose from this issue beginning with a glorious snake dancer which once again surpasses most of his previous efforts, three Nubian harem guards, two nude female prisoners in various forms and restraining devices and a nude villainous looking male—all in 54mm followed by a lady in great distress in a very fantasy oriented costume in 80mm. Also from Monarch this time for sculptor Bill Merkle is 77mm dancing Mexican. These figures are pro-

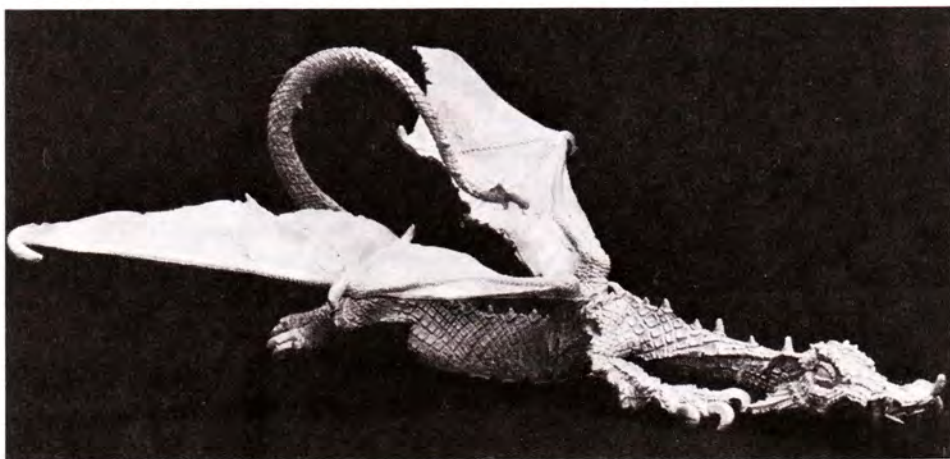


duced with the excellent quality we have come to expect from Monarch Miniatures.

other hybrid winged monster, a bearded warrior with an axe and a heroic winged figure with a flaming sword. Under Two Flags, the London firm, have just released an absolutely marvelous figure in 90mm of King Charles II's personal guards which were to become what are today the Life

Heritage Models in their fantasy war game scale have issued six new figures in 25mm. These include a villainous looking figure mounted on a dragon, a devil, a winged beast-like creature, an-

**Another compendium of oddities by Ral Partha, including a stalking dragon with pussycat moves.**





**LAST CHANCE AT THIS PRICE!!**

# FANTASY Modeling

PREMIERE ISSUE

**Wargames—The Greatest Fantasy of Them All!**

**Kitbashing Spaceships**

**The Popular Imagery of Boris Vallejo**

**The Plastic Industry Strikes Back!**

**Atlantis—No Longer a Lost Continent**



## MAKING SPACESHIPS

Science fiction hardware, one of the most popular branches of fantasy modeling, explored in each issue in vivid, detailed color photos and step-by-step construction pictures.



## KIT BASHING & SCRATCH BUILDING

The two most popular methods of model building—the creative differences between them—some incredible examples of each approach in every issue.

**NOT AVAILABLE AT NEWSSTANDS  
SUBSCRIBE TODAY AND SAVE!!!  
(Regular cover price: \$2.50 per issue)**

## GAMING

This aspect of fantasy modeling is a growing new excitement around the world—professional war games, board games, electronic games, participation games and all sorts of wild, wonderful fantasy games that have been invented and produced by local fans and companies.

## BOOKS

A review of valuable publications which you ought to have on your library shelf—books about modeling, fantasy and science fiction art, interesting related topics.

**At last . . .**  
a professional, full-color magazine that covers everything in the wonderful world of modeling!

## FANTASY FIGURES

From magnificent heroes and sexy heroines to dragons and elves and dinosaurs and all the other incredible creatures of fantasy, here are color photos galore in each exciting issue.

## MILITARY MODELS

Experts of the field have called military models the greatest fantasy of all—here are colorful troops of all ages in history—famous warriors in full regalia—powerful horses, scenes of battle and action.



## CREATING DIORAMAS

Fantastic miniature settings for fantasy figures—how to assemble ornate furniture, props, painted backgrounds, and special lighting for dramatic effects.

## COLLECTIONS

A look into the private showcases of serious collectors—rare and wonderful items that have been accumulated and preserved over the years.

## MODEL KITS

From plastic to metal, each issue includes information on the most outstanding manufactured kits available—their faults, behind-the-scenes looks at their making, and the best examples of assembly-line models.

Send cash, check or money order to:

DEPT. FM5

**FANTASY MODELING 475 Park Ave. South New York, NY 10016**

Yes, at last I can subscribe to a magazine that covers everything in the wonderful world of modeling.

One Year \$9.99  
(four quarterly issues)  
U.S. and Canada

Foreign \$12.39  
(surface mail)

NAME

ADDRESS

CITY

STATE

ZIP

Please allow 4 to 8 weeks for delivery of first issue.

**Satisfaction Guaranteed!**



# COLLECTABLES

Guards. This figure is really excellent in every detail and sculpture.

Grenadier Models has given us an assortment of very fierce looking 25mm figures which include some ferocious Orcs, two strange looking human bodied creatures with a reptilian head and the other with a elephantine one and then three feline headed fighters. These are all very well detailed and make a fine addition to any fantasy army.

Britains Limited, long noted for their fine model soldiers and farm equipment toys, has entered the realm of science fiction. There are six basic figures in their Space Series, five men and one woman, each of which is sold as both good guy "Stargards" (yellow suits, clear dome helmets) and nasty "Aliens" (black suits, red helmets). These soft plastic, 1/32 scale figures come with removable weapons and metal bases, and are sold individually and in boxed sets.

Also available is an eight inch long Space Craft that features two other "Stargards" in a clear plastic spherical cockpit. Most of the ship is plastic, but the tail assembly is metal. Modular construction allows the Space Craft to be combined with parts from Britains' other two space items, the Space Cannon and Landing Pad.

**Cliff Sanderson's undulating snake dancer entertains three of his non-plussed eunuch's. A mad Mexican hat dancer by Bill Merklien appears to be in his cups a bit. All are from Monarch Miniatures, Inc.**



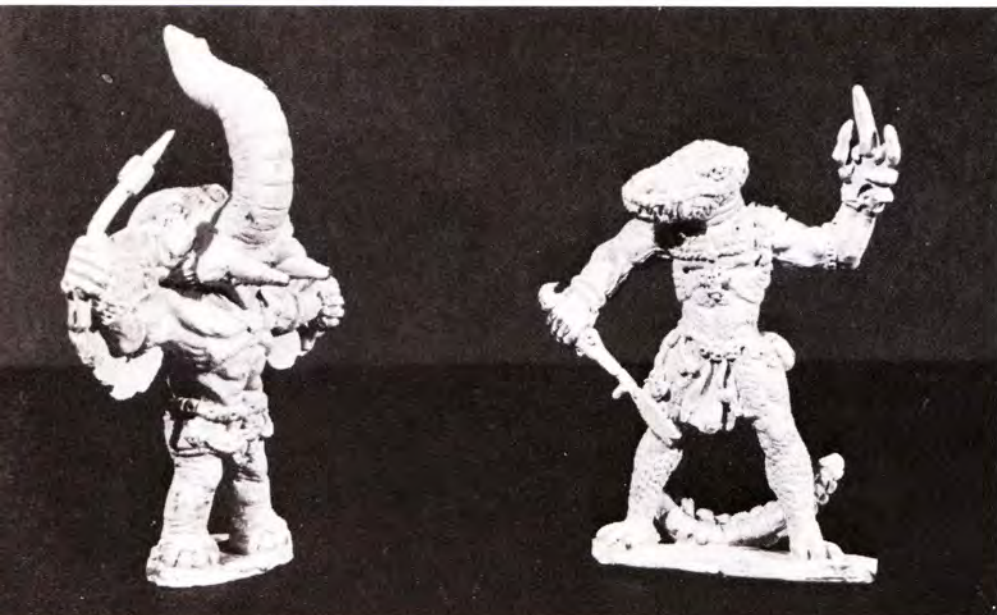
**This fabulous Royal Horse Guard Standard Bearer, leading the way for King Charles II, is a masterpiece in 90mm by Under Two Flags.**



**Heavy on wings Heritage's 25mm line includes a knight mounted on a (tamed?) dragon, a pair of devils, and a woodsman betwixt two winged battlers.**



Continued from page 17



Grenadier has pushed back the borders of the bizarre with this beastial collection of 25mm gaming figures. Pictured are a squad of bat-

ting Orcs, a lizard-warrior, an elephantine creature, and cat-headed knights.

nia to photograph and measure the real star of *Forbidden Planet*, but no model work was ever started.

The list of new spaceships planned for this classic science fiction series was headed by the *Lost In Space* Jupiter 2. (I was determined to stop the seemingly endless requests for this kit.) The Martian War Machines seen in *The War of the Worlds* would have been right behind, along with George Pal's version of *The Time Machine*.

The classic SF series was produced. It appeared in the hobby shops in 1975, but not in the form originally conceived by Research & Development. The six kits were all reissues, and all vehicles. There were no figures, and no new items. Consumer tests made with previous science fiction kits—both vehicles and figures, and made by Aurora and other companies—showed a substantial preference for kits of vehicles over figures. So, top management decided to play it safe, and went just with reissued spacecraft.

## PLENTY OF IDEAS WITH NO PLACE TO GO

While I was working at Aurora, people would always ask me "Have you ever considered a kit of . . . ?" You could have filled in the blank with just about anything, and the answer would have been "Yes!" Ideas come easy, and dreaming up the ideal kit line was one of the things we development people got paid to do. Visualizing those ideas on paper didn't take much time or cost much money. We generated paper dreams by the ton. Translating those ideas into steel and beryllium-copper molds was another matter entirely. Every company has its limits. There are just so many dollars for new tooling, and just so many man-hours that can be devoted to developing, producing, and selling a new kit. As a hobby kit producer, Aurora is gone. The array of fantasy modeling subjects it created surpasses that of any other American plastic kit manufacturer. Yet, at the time they were produced, many Aurora kits were ignored by "serious" modelers. Now, those Aurora kits are prized collector's items. Imagine what models would be available if Aurora was still in the kit business. The cycles continue, and the ideas are still there. Maybe someday all the right combinations of elements will come together at the right time, and the likes of Robby the Robot, the Invisible Man, and the Martian War Machines will find their way onto the hobby dealer's shelves. Modelers and manufacturers. ■



## Inner Space

**S**cience fiction model building is not limited to individual spaceships and singular aliens and robots. Dioramas are just as much a part of the world of outer space fantasy as they are in other areas of modeling. Collections of small spacecraft and vehicles can be assembled in hanger scenes, and figures can be entwined in weird planetary landscapes or set against futuristic spaceship interiors.

Any interior scene will benefit from the addition of lots of background detail, and today's "disposable society" is more than happy to provide the modeler with plenty of raw materials that can be turned into diorama clutter!

Tomorrow's space pioneers will require all sorts of supplies, and even scale model astronauts and space warriors need to have basic materials and equipment replenished. So, it seems logical that various types of cargo containers could litter any spaceport, maintenance bay or rocket interior. Photo 1 shows three different cargo containers all made from discarded objects.

The first is a high pressure gas container made possible by the unlikely combination of *Tickle* antiperspirant and *Clorox* liquid bleach! The roll-on deodorant ball is a perfect sphere, and there's not even a seam to sand away. The cap from the one quart size *Clorox* bottle makes an ideal base for the sphere once some of the internal screw threads are removed. A few scraps of plastic create the lift rings and other details.

Nothing more than a coat of paint and a few decals were needed to change a regular photo flash cube into the second cargo container.

What better source for a model container than a real one—a Half & Half cream container to be precise? Every fast-food restaurant throws out thousands of these little cups a day, while the Rebel Alliance anxiously awaits its next shipment of Scale Forty-Eight Koffiecream! Two cups are needed for each finished container. Start by cutting off the flat rims. Then glue the two cups together, and cover the joint with a thin strip of plastic or tape. Finally, glue a small disk of plastic over the manufacturer's name that is molded on the bottom of the cup. Be careful cementing these cups together. They are made of very thin, vacuum formed plastic, and they will distort or melt if too much cement is used. Avoid tube cements, and use a liquid type sparingly.



Although I've made cargo containers from these bits of junk plastic, these same parts can be used in model spaceship construction as fuel tanks, engine components or surface detail.

Photo 2 takes us back to the fast-food restaurants and liquid refreshments. These days, every cup of coffee and soda (thick shakes, too) comes topped by a plastic lid designed to keep the contents from spilling. If you take a close look at them, you will be convinced that they are also designed to be massive doors, bulkheads, and other spaceship paraphernalia! The half dozen lids shown here are just a few of the many styles and sizes that are available.

You can't have a spaceship interior that doesn't have at least a few scale miles of pipes and wires. A couple of felt-tipped markers became the massive, leaking pipes running up the wall in this scene, while Plastruct tubing was used under the platform. The Plastruct had to be bought at a hobby shop, but the dried-out markers were found in the back of a desk drawer and cost nothing. It all equals out!

The spaceman pictured is a slightly modified "Stargard" from the Space Series of toys by Britains Limited. His gun came from a 1/48 scale tank kit, and a few extra details were added to the helmet collar. ■

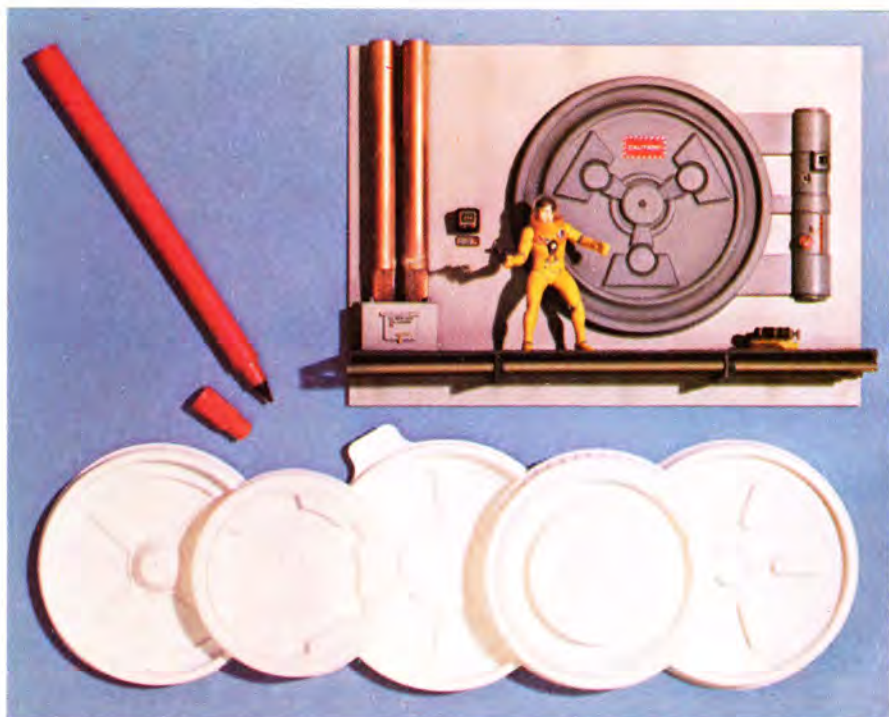
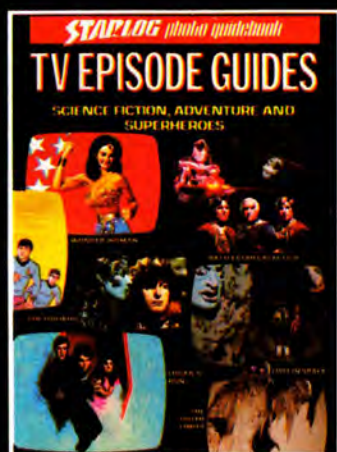


PHOTO 5: JOHN CLAYTON



# NEW **STARLOG** photo guidebooks

Latest Releases



## TV EPISODE GUIDES Science Fiction, Adventure and Superheroes \$7.95, 96 pages

A complete listing of 12 fabulous science fiction, adventure or superhero series. Each chapter includes (a) complete plot synopses (b) cast and crew lists. (c) dozens of rare photos, many in FULL COLOR



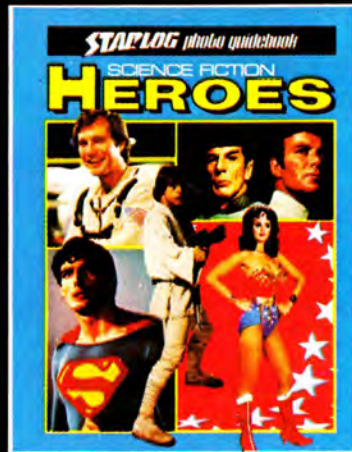
## TOYS & MODELS \$3.95, 34 Pages (Available October)

A photo-filled guide to the fantastic world of toys and games. There's everything from Buck Rogers rocket skates to a mini Robby the Robot! Full-color photos showcase collections spanning four generations



## SPACESHIPS (new enlarged edition) \$7.95, 96 pages

The most popular book in this series has been expanded to three times the pages and updated with dozens of new photos from every movie and TV show that features spaceships—the dream machines! Many in full color



## HEROES \$3.95, 34 pages

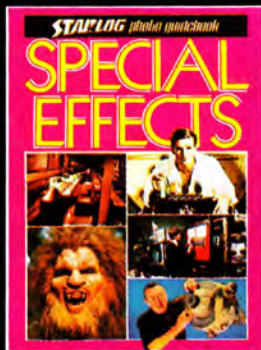
From Flash Gordon to Luke Skywalker, here is a thrilling photo scrapbook of the most shining heroes in science fiction movies, TV and literature. Biographies of the men and women who inspire us and bring triumphant cheers from audiences

### All Books In This Special Series

- Quality high-gloss paper.
- Big 8 1/4"x11" page format.
- Rare photos and valuable reference data.
- A must for every science fiction library!
- Available at Waldenbooks, B. Dalton Booksellers and other fine bookstores. Or order directly, using the coupon below.



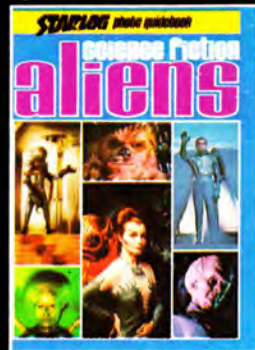
VILLAINS, \$3.95  
34 pages, full color throughout



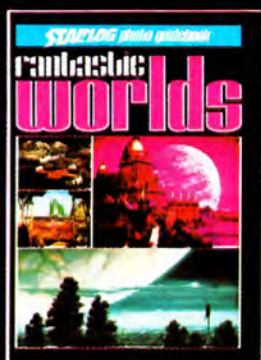
SPECIAL EFFECTS, VOL. II  
\$7.95, 96 pages



SPACESHIPS \$2.95  
34 pages, over 100 photos



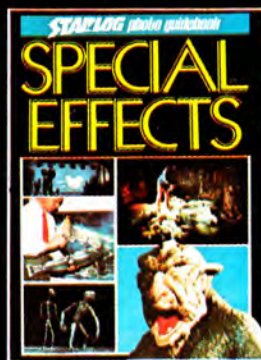
ALIENS \$7.95  
96 pages, over 200 photos



FANTASTIC WORLDS \$7.95  
96 pages, over 200 photos



SPACE ART \$8.95  
(\$13 for deluxe)  
196 pages, full color throughout



SPECIAL EFFECTS, VOL. I \$6.95  
96 pages, full color throughout



SCIENCE FICTION WEAPONS \$3.95  
34 pages, full color throughout



ROBOTS \$7.95  
96 pages, full color throughout

Add postage to your order:

HEROES .....\$3.95  
VILLAINS.....\$3.95  
SPACESHIPS I.....\$3.95  
WEAPONS.....\$3.95  
TOYS & MODELS.....\$3.95  
Prices for all of the above:  
3rd Class.....\$1.00 ea.  
1st Class.....\$1.25 ea.  
Foreign Air.....\$2.25 ea.

SPACESHIPS  
(new enlarged).....\$7.95  
SPECIAL EFFECTS VOL. II  
.....\$7.95  
TV EPISODE GUIDE BOOK  
.....\$7.95  
ALIENS.....\$7.95  
FANTASTIC WORLDS  
.....\$7.95  
ROBOTS.....\$7.95  
Prices for all of the above:  
3rd Class.....\$1.75  
1st Class.....\$1.55  
Foreign Air.....\$2.50

SPECIAL EFFECTS.....\$6.95  
3rd Class.....\$1.50  
1st Class.....\$2.00  
Foreign Air.....\$5.50  
SPACE ART  
Regular Edition.....\$8.95  
Deluxe Edition.....\$13.00  
U.S. Book rates  
.....\$2.00 ea.  
U.S. Priority.....\$2.57 reg.  
.....\$3.30 deluxe  
Foreign Air.....\$7.00 reg.  
.....\$8.50 deluxe

Send to:  
STARLOG GUIDEBOOKS  
DEPT. FM5  
475 Park Avenue South  
New York, NY 10016

total enclosed:\$  
NYS residents add sales tax  
Please allow 4 to 6 weeks for delivery of 3rd Class  
mail. First Class delivery usually takes 2 to 3 weeks.

Name

Address

City

State

Zip

ONLY U.S., Australia and New Zealand funds accepted.  
Dealers: Inquire for wholesale rates on Photo Guidebooks.  
NOTE: Don't want to cut coupon? Write order on separate piece of paper.



# THE COMPLEAT STRATEGIST

## THE FANTASY GAME CENTER

### THAT HAS IT ALL!

If you're into Fantasy, then come to THE COMPLEAT STRATEGIST where you'll find the largest selection of fantasy related items ever assembled. We carry all Role-Playing Games, a Rainbow of colored dice, every Fantasy and Science-Fiction Gaming Magazine currently in print, a complete line of paints, brushes, accessories and the largest selection of fantasy figures available. We also stock the newest fantasy products as soon as they're released. When we call ourselves THE COMPLEAT STRATEGIST we're not just boasting because we have games, books,

magazines and figures for the historical gamer too!

There's a friendly atmosphere at THE COMPLEAT STRATEGIST and our staff is always ready to answer any questions that you may have and assist you with your purchases. Game Rooms\* are located in our stores so you can start your "adventure" right away.

If you can't visit one of our stores, we accept mail AND phone orders. Mail orders are accepted ONLY at our 33rd Street location; or by phone during business hours at (212) 685-3880-1.

Please use VISA or MASTERCARD

for phone orders.

Send for a free Catalog to the store location nearest you.

**THE COMPLEAT STRATEGIST**  
**WE'VE GOT IT ALL!**

\*No game room at the 57th St. store.

**IN NEW YORK:**  
11 E. 33rd Street  
N.Y.C. 10016  
(212) 685-3880-1  
10:30-6:00  
Mon. to Sat.  
Thurs. till 9:00

**We are proud to announce the opening of our newest location**

**320 West 57<sup>th</sup> Street  
New York, New York**

**IN NEW JERSEY:**  
209 Glenridge Ave.  
Montclair, N.J. 07042  
(201) 744-6622  
11:00-7:00  
Tues. to Sat.  
Thurs. till 9:00

**IN FLORIDA**  
5406-8 Stirling Rd.  
Davie, Fla. 33314  
(305) 961-5660  
11:00-7:00  
Tues. to Sat.  
Thurs. till 9:00

